DOCUMENT RESUME

ED 180 341 HE 012 074

AUTHOR Patterson, Lewis D.
TITLE Costing Collegiate Cooperation. A Report on the Costs and Benefits of Interinstitutional Programs with Consortium Case Studies and Guidelines.
INSTITUTION Council for Interinstitutional Leadership, University, Ala.
SPONS AGENCY Carnegie Corp. of New York, N.Y.
PUB DATE Oct 79
NOTE 449p.; For related document see HE 012 073
AVAILABLE FROM Council for Interinstitutional Leadership, P.O. Box 6293, University, AL 35486

EDRS PRICE MF01/PC18 Plus Postage.
DESCRIPTORS Case Studies; Church Related Colleges; *Consortia; *Cooperative Programs; *Cost Effectiveness; Efficiency; Guidelines; *Higher Education; *Interinstitutional Cooperation; Operations Research; Private Colleges; Program Evaluation; Purchasing; School Registration; *Shared Services; State Universities; Student Personnel Services

ABSTRACT

Results of a two-year study of the cost effectiveness of cooperative programs operated by voluntary consortia of colleges and universities are reported. The findings are demonstrated in such a way that the potential benefits of such programs can be more widely understood. Six consortia were studied, including a consortium of three Catholic liberal arts colleges, a consortium of one private liberal arts college and two state universities located in two states, and a nine-institution consortium of eminent theological schools, among others. Separate chapters consider: (1) cross registration programs; (2) library and media cooperation; (3) student services, such as financial aid programs and career planning and placement services; (4) group purchasing; (5) cooperative nontraditional higher education organizational structures and distance learning systems, and (6) cooperative academic programs. A summary chapter identifies common areas of cost benefit, such as diversity, access, financial advancement, and efficiency. Appended are papers on the methodology of analyzing the cost of interinstitutional cooperation. (PHR) and

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COSTING COLLEGIATE COOPERATION

A Report on the Costs and Benefits of Interinstitutional Programs with Consortium Case Studies and Guidelines

Council for Interinstitutional Leadership

Lewis D. Patterson, Project Director

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The study here reported was made possible through funds granted by the Carnegie Corporation of New York. Statements made and views expressed are solely the responsibility of the Council for Interinstitutional Leadership.

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FOREWORD

What follows in this Report on the cost and benefits of Collegiate Cooperation reflects its authors in a number of ways. First, they work at the creative edge of institutional interreliance, facilitating its evolution at every stage. Second, they sought out and welcomed the willing assistance of those whose special abilities could develop methods for portraying its cost and benefit. Third, they identified, and detailed the facts on a rich variety of programs and processes found in organizations which embody substantial, interreliant work in consortia of colleges and universities.

On their behalf, therefore, I am pleased to present their findings. The care, objectivity, and courage reflected in their work is yet another example of combined individual enterprise and social cooperation which give civilized life its verve and richness.

Ten years ago, our Executive Director, Dr. Lewis D. Patterson, noted that: "Anything an institution does individually may be pursued more economically or with improved quality if undertaken in consort." Today the evidence here indicates the accuracy of that observation. In addition, these findings suggest that consortia are synergistic in nature; their total value is greater than the sum of their parts.

In the years 1980-95, when there will be a 20% decline in traditional college-age youth, and income from all sources may become depressed, there are four possible courses of action for colleges and universities:

- Survive alone;
- Develop substantive voluntary cooperation;
- Accept publicly mandated coordination;
- Terminate operation.

Given a preference, most institution-based leaders might favor the order in which the choices are presented above. Yet, given current and projected economic conditions, "going it alone" does not appear to be a realistic alternative. If that proves true, the critical question is whether or not voluntary cooperation can provide a more cost effective and humane alternative than statutory coordination.

We hope the findings described in this Report will prove helpful in making responsible decisions which will decide the future form and function of American institutions. The Carnegie Corporation, through its support of this project, has again demonstrated its concern for and commitment to a dynamic future for these institutions.

This Report samples the state of the art of voluntary institutional cooperation. No single innovative model exists for college cooperation. Indeed, there are many such models and they are as internally complex as they are varied. Variation is the key consideration in building interreliance.

This study on costs and benefits of cooperation reflects the full range of needs and aspirations now existing in American higher education. The analyses show the needs that are being met and the many ways aspirations can be acknowledged.

Dean E. Tollefson

President
Council for Interinstitutional Leadership
Executive Director
Union of Independent Colleges of Art

ACKNOWLEDGEMENTS

This report presents the most thorough review ever undertaken of consortium cost effectiveness. Its preparation required extensive cooperative effort and reflects an investment of the time and effort of over 300 people. A full appreciation of this endeavor will flow from a just recognition of the document's substance. Those listed in the credits that follow transformed this effort into a major work. Their relationships moved quickly from casual neighborness to statesmanship involvement. The need for this study was clear and they performed with distinction to meet the need.

Major authors of chapters were: I. Introduction - Lewis D. Patterson, Council for Interinstitutional Leadership; II. Cross-Registration - Webster C. Cash, Atlanta University Center, and Franklin L. Courson, New York City; III. Library and Media Cooperation - Lewis D. Patterson, CIL; IV. Student Services - Dean E. Tollefson, Union of Independent Colleges of Art, and Webster C. Cash, Atlanta University Center; V. Group Purchasing - Robert M. Briber, Hudson-Mohawk Association of Colleges and Universities; VI. Cooperative Non-Traditional Higher Education Organizational Structures and Distance Learning Systems - George P. Connick, University of Southern Maine, and Donald A. Johnson, Quad-Cities Graduate Study Center; VII. Cooperative Academic Programs - Mary H. Ellis, New Orleans Consortium, Robert L. Burns, West Central Wisconsin Consortium, and John McCune, Tri-College University; and VIII. Summary Observations - George P. Connick, University of Southern Maine, Lewis D. Patterson, Council for Interinstitutional Leadership, and Dean E. Tollefson, Union of Independent Colleges of Art.

Contributors to individual case studies included: (1) Tri-College University Film Center - Darrel M. Meinke, Moorhead State University, (2) Auraria Higher Education Center - Daniel K. Paulien, Auraria, (3) Coast Community College Telecourse Production - Peter Vander Haeghen, Coast Community College, (4) Mid-Coast Community College Services - Pamela MacBryne, University of Maine at Augusta.

We owe a great debt of gratitude to Thomas O. James, Vice President for Financial Affairs at Birmingham Southern College, and Chairman of the NACUBO Small Colleges Committee. He provided invaluable leadership in developing the methodology used in the analyses. A basic working document developed by James is presented in Appendix B: "Toward a Methodology for Analyzing Costs of Interinstitutional Cooperation."

For their service and guidance as members of the Advisory Committee, I wish to thank Thomas J. Diener, Director, Institute of Higher Education Research and Services, University of Alabama; D. F. Finn, Executive Vice President and M. J. Williams, Special Projects Director, National Association

of College and University Business Officers; Robert L. Gale, President, Association of Governing Boards of Universities and Colleges; Franklin Patterson, Frank L. Boyden Professor of the University, University of Massachusetts, Boston; and Thomas O. James who also generously involved other members of the NACUBO Small Colleges Committee.

Instrumental in receiving the grant from the Carnegie Corporation for the project were Arden K. Smith, former Director of the Central Pennsylvania Consortium, and Mary H. Ellis, Executive Director, New Orleans Consortium.

Special gratitude is extended to the many consortium directors and institutional representatives whose operations were the subject of inquiry, and who, with understanding and diligence, cooperated with their colleagues in providing needed data.

A most special and personal word of appreciation goes to Dean Tollefson and his fine staff at the Union of Independent Colleges of Art. As President of CIL, he has given exceptional leadership to our joint effort and he has played numerous important roles in bringing this project to a successful conclusion. I am particularly indebted to H. Clayton Ackley, also of UICA, who played key roles as technical editor and materials coordinator in the final preparation of this document. For their diligence, patience, and good work in typing this manuscript, UICA staffers Jerri Troeger and Aneliese Wrzesien are deserving of recognition second to none. My love goes to all of the UICA folk.

Also for their aid in so many ways, I thank Marilyn Emplaincourt, a colleague at the University of Alabama; Sandra Hackney, my assistant; and typist Pat Gregg, Kansas City Regional Council for Higher Education.

Finally, sincere gratitude is expressed to E. Alden Dunham and Karen Egan at the Carnegie Corporation of New York for their confidence in CIL and for their guidance in advancing this project.

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CHAPTER I

INTRODUCTION TO THE PROJECT

CHAPTER I

INTRODUCTION

The Council for Interinstitutional Leadership (CIL) traces its roots to 1967 when the executives of a number of consortia began to develop an informal network to share experiences. In 1975, steps were taken to strengthen and formalize the network of cooperative relationships by founding a new, non-profit, tax-exempt corporation - CIL. The Council is the only national association of its kind dedicated to voluntary cooperation and the improved effectiveness of postsecondary institutions through consortial endeavor.

CIL services include an information and communication center, national conferences for personal and professional contacts, cooperative publications (including a newsletter, directory, and bibliography), and task forces in the areas of state and federal relations, urban affairs, the arts and humanities, research, consortial organization structure, and the theoretical bases of cooperation.

Membership in CIL is open to cooperatives, institutions, agencies - even individuals. There currently are sixty-four dues-paying members (representing 743 institutions) and thirty-one individual and institutional members.

CIL/Carnegie Cost Effectiveness Study

In July 1977, CIL undertook a two-year project to study the cost effectiveness of cooperative programs operated by voluntary consortia of colleges and universities, and to demonstrate the findings in various ways in order that the potential benefits of such programs would be more widely understood. The project was supported by the Carnegie Corporation of New York with a grant of $121,200. The first of the project's purposes was to determine, through study of consortial operations, actual dollar savings that have accrued to specific colleges and universities from their cooperative programs, to record the increases in revenues realized from such programs, and to estimate, in value terms, the other benefits that cooperative programs offer to students and faculties through giving them access to the resources of more than one college or university. The two other purposes of the CIL/Carnegie project were to disseminate widely the findings from the research in the form of a report which might be used by other consortia in strengthening cooperation, and to conduct a series of on-site assessment and implementation projects with consortia selected as representative of the nation's higher education consortia.

In implementing the project, it became necessary to overlap the three purposes throughout the two-year period, rather than to keep them sequentially separated. For example, the "identification and validation of specific cases," that was set forth in the first purpose, has continued from the beginning throughout the duration of the project.

Fulfillment of the second purpose, "to record and widely disseminate the findings," likewise has been a continuing process. The findings and analyses that have accrued as the project progressed have been used and disseminated in a variety of ways and forms: individual and team visits, news articles, written reports, conference presentations, and responses to individual requests. This final report will be printed and distributed nationally in August 1979.

The third purpose, "to conduct on-site assessment and implementation projects based on the guidelines with eight representative consortia," has been accomplished. CIL realized early in the first year that the production of comprehensive guidelines for assessing the costs and benefits of cooperation presented the most formidable challenge of the project. It also became obvious that the experiences and findings of the team visits would contribute as much to the evaluation of the guidelines as any other single source of information.

The third purpose was further satisfied in that on-site assessments were conducted with team members who had been intimately involved in each step of the project as it evolved and who carried with them the best information on techniques for analyzing costs and benefits of cooperation. "Implementation" was accomplished through the dialogue and exchanges which took place in each visit. These were helpful to the consortia in resolving specific problems, in furthering the consortium planning process, in implanting new perspectives on the costs and benefits of cooperation, and in furthering the professional development of consortium personnel.

In the project's formative stages, which concentrated on the analysis and organization of cost data and the estimating of benefits in various consortial settings, it became evident that the theoretical base for this research needed strengthening. A methodology detailing guidelines were needed. The persons most active in the study felt that the literature relevant to the study should be reviewed by those thoroughly familiar with the financing of higher education and who also had a background in economics and experience in the business management of the colleges and universities. Dr. Thomas O. James, then the Treasurer and Business Manager of Chatham College and also the Chairman of the Small Colleges Committee of the National Association of College and University Business Officers, consented to conduct the review. The full text of his methodology paper is an appendix to this report.

James uses as a launching pad, several studies and financial manuals prepared under the auspices of the National Association of College and University Business Officers, the American Council on Education, and The National Center for Higher Education Management Studies. Their studies and manuals were the results of large-scale research on cost analysis in higher education. The first half of his monograph concentrates on the findings of those studies and manuals, and interprets them for purposes of cost analysis of consortial programs. As a result of this review, it was clear that the methods of cost analysis available to the CIL/Carnegie project and to consortia undertaking evaluations of their own programs are beset with difficulties of at least three kinds.

First, cost analysis is not a well developed art in the management of colleges and universities. The cost analysis of a consortium's program is much constrained by the cost data, costing systems, and cost analyses of the colleges and universities which comprise the consortium.

Second, the development of cost analyses and program evaluations in consortia requires a large element of negotiation among institutional professionals and the consortium director. In James' words, "Cost analysis in a consortium is a negotiated process."

Third, since compatability of data among different institutions within a single cooperative program is not always obvious, the validity of interinstitutional comparisons is emphasized in order to minimize the loss of credibility of the resulting program evaluations.

The last half of James' monograph is concerned with a methodology for cost analysis of consortium programs, setting the CIL/Carnegie Project on a path toward establishing a methodology. In doing so, he drew from his extensive knowledge of NACUBO's work in establishing principles and standards for financial mangement, including cost analysis. He also has drawn from his years of experience as the Chief Business Officer of a college with membership in a successful ten-institution consortium (The Pittsburgh Council on Higher Education). Ever mindful of the critical role of presidents, business officers, and other professionals in fostering the success of consortia, he has shaped an outline of principles and procedures that calls for the participation of institutional officers and professional staff at various stages in the evaluation of cooperative programs. Cost analysis of these programs must reflect the cost information systems and cost data of the member institutions, and can be no better than their systems and data permit.

A strength of his proposed methodology is that it conforms closely with methods, techniques, and principles recommended by NACUBO which are in general use throughout higher education. Another strength of the methodology is its requirement that the cost analysis and evaluation be validated by appropriate officers of the member institutions.

What is proposed here is a very substantial beginning that has permitted the CIL/Carnegie Project to proceed with confidence toward the development of a methodology and guidelines for use by consortium directors.

Work on a methodology for benefits analysis was further refined in the visits to consortia. This was a participatory process involving officers and professionals of consortium institutions who were the leaders of their consortium programs. What evolved on benefits analysis, then, is found in the reports from the individual and team visits. Different strategies were used in different visits, and the procedures varied among different programs. The benefits of joint academic programs, cross-registration, library cooperation, a cooperative financial aid program, a joint admissions program, and cooperative purchasing all differ from one another. The central thread is that they are all interinstitutional.

This report contains the findings and observations of all those involved in the CIL/Carnegie project. Although it is the first extensive report analyzing the cost effectiveness of consortium programs, it is really only a beginning.

CIL recognized early in the project that consortia are engaged, collectively, in almost all of the types of services and programs that can be found at a major individual institution. These included (1) Cross-Registration, (2) Library and Media Cooperation, (3) Student Services, (4) Group Purchasing, (5) Non-Traditional and Distance Learning Programs, and (6) Academic Programs.

Future Analyses

Other important cooperative program areas need similar analysis:

- Additional academic and professional programs, including
    - Medical education, nursing, and allied health sciences
    - International education and foreign languages
    - Computer science and mathematics
- Cooperative education and experiential education
- Professional faculty and staff development
- Energy conservation
- Administrative systems and programming
    - Information dissemination and fund-raising
    - Computer sharing and data processing

The structure of this report allows the reader to move directly to those areas of primary interest or to specific case studies. Each chapter is presented as a complete entity so that it is possible to gain both an overview and a detailed description of costs and benefits by area.

Special attention is called to the summary observations which identify those threads of significance appearing again and again, interwoven into the fabric of costs and benefits in substantial voluntary cooperation.

The reader's response to any and all parts of this document is invited.

CHAPTER II

CROSS-REGISTRATION

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CROSS-REGISTRATION PROGRAM

Cross-registration is the most widely adopted program of voluntary cooperation in higher education.

The rapidity with which cross-registration programs have been introduced in recent years and their widespread use today attest to the pragmatism of college and university administrations, which is not always thought to be one of the hallmarks of higher education. That the arguments for cross-registration are compelling has long been known. What has not been known is whether the programs are, in fact, meeting their objectives. Until the CIL/Carnegie Project was undertaken, no empirical study of this question had been pursued except by an occasional director reviewing his or her own operations or by researchers studying a single consortium cross-registration program. Team visits to six consortia that operate cross-registration programs have made possible the development of such a study. Its major findings are the subject of this chapter.

The main conclusions of the study are that all of the cross-registration programs reviewed are indeed effective in meeting their objectives, and that they all have a highly favorable ratio of benefits to costs regardless of how the concept "benefits" is defined. It has been stimulating for the teams to visit college after college and university after university and to find everywhere, without exception, enthusiasm for cross-registration. The praise is high; the criticism muted.

The perception in 1977 that a study of cross-registration's effectiveness was needed and the events leading to the study are embedded in the larger design of the CIL/Carnegie Project. As one part of the Project it was planned that the cost effectiveness of cross-registration would be studied systematically in team visits at selected consortia that would have certain characteristics. The sample was to be representative of higher education consortia, and at least some of the consortia chosen would be expected to reveal "success stories" that might be emulated elsewhere. The consortium director would collect data and assist with other team needs, and officers of the member institutions would be asked to spend some time sharing their thoughts with team members. Other consortia had also expressed the desire for a team visit, but time and resources would not permit the inclusion of more than six.

The purpose of the cross-registration study is the same as the purpose of the CIL/Carnegie Project. In brief, it is to measure the cost effectiveness of cross-registration programs by demonstrating quantitatively that the programs have one or more of the following results for the member institutions:

- Educational costs are either decreased or increased;
- Cost increases in the future will be constrained or avoided, or they will not;
- Benefits are provided that are worth the program's costs regardless of its budgetary consequences at the institutions, or the benefits are not worth the costs;

- Revenues increase more than costs, or they do not.

The first on-site visit by a team was at the New Orleans Consortium in the spring of 1977, and the second was at Tri-College University (Fargo-Moorhead) that June. The two visits were valuable in starting the process of collecting cross-registration data for analysis. They were even more valuable in developing a conceptual framework. The concepts that became the basis for all cross-registration analyses undertaken in the study grew largely out of conversations with senior officers of the member institutions at those two consortia. Earlier thoughts of team members about measuring cost effectiveness were modified as the officers explained why they felt that the costs of operating cross-registration are small, even trivial, and perhaps should not be measured, and the benefits of cross-registration are diverse and important. At all six consortia, team members were often told that many of the greatest values simply cannot be measured: the subtle value of study on another campus in an academic climate that is different, the importance to a student of one particular course at one particular time not offered on the student's own campus, the educational worth of knowing students and faculty elsewhere, the value of another library to students and faculty, and the attractions of cross-registration to students considering enrolling at a consortium institution.

The scope of the study was limited to the six consortia visited although the findings also include brief reference to reports on cross-registration supplied by other consortia. Because time and funds were limited, no consortium in the Mountain and Pacific states could be included. Because "representativeness" was a criterion for selection of the six consortia to be visited, there are wide differences among them in several major characteristics:

- The number of member institutions comprising a consortium varies from three to ten;

- Enrollment in the member institutions varies from less than 200 students in several theological schools to 30,000 students in one university;

- The mix in sponsorship and educational purposes of the member institutions varies widely. They include:

    1. A consortium of three Catholic liberal arts colleges;

    2. A consortium of one private liberal arts college and two state universities located in two states;

    3. A consortium of four highly selective private liberal arts colleges and one large state university;

    4. A consortium of four liberal arts colleges, a small research university, and a theological center that itself consists of six small seminaries, with all of these institutions being private and composed of a predominantly black student body.

    5. A nine-institution consortium of eminent theological schools, all of which offer only graduate programs; and

6. A ten-institution consortium of four private liberal arts colleges, one regional community college, one seminary, two highly selective private research-oriented universities, and one of the nation's largest state universities.

Most of the teams gave two to three days to the initial on-site visit, and at several consortia, a member of the team made a return visit. After the first two teams had completed their visits, a methodology was prepared which grew from the conceptual discussions at the New Orleans Consortium and Tri-College University. In the other four visits, forms were used for the collection and compilation of data. Interviews were kept informal. The team members gave as much time as possible to interviewing, and college and university officers including presidents and vice-presidents were generous of their time. The registrars were especially generous; at most colleges and universities in the six consortia they undertook research to fill in data gaps. The consortium directors set aside days at a time and sometimes evenings to work with the team.

As a result of this cooperation and of subsequent analysis and writing by two members of the visiting teams, the study accomplished what had been sought. Despite the diversity in the consortia and in the mix of their member institutions, there is a surprising uniformity in the major findings.

The Frequency of Cross-Registration in Consortial Settings

The frequently made statement that cross-registration is the most widely adopted program offered by consortia has support in the work of the CIL. Reading the 1978 edition of the CIL Consortium Directory leaves a distinct impression that the statement is correct.

Bridget Brickner Wehner has tested this impression. Using the list of 115 consortia registered and described in the 1977 edition of the Directory, she distributed a survey instrument and received 82 responses. Of the responding consortia, 46 (56%) replied that they had a cross-registration program. Three-fourths of those programs were five to ten years old, and another 11% were more than ten years old. Of the 36 consortia that did not have a program, seven (19%) indicated that they planned to establish one.

The consortia with programs may be classified into four types. Three are a mixture of private colleges and universities. Four have a membership of all theological seminaries. The others are divided about equally between consortia of all small, private colleges, and consortia that combine public and private institutions in various proportions.

A Profile of the Six Consortia Visited

The selection of consortia to be visited was as stated earlier, according to two basic criteria. The consortia were to be in some sense "representative" of voluntary cooperation in higher education consortia. This criterion was subdivided into a) public-private mixture, b) liberal arts-research university mixture, and c) special roles in higher education.

As shown in the profile on the following pages, the six consortia meet those criteria as follows:

a) Public-private mixture: Five Colleges, Pittsburgh Council on Higher Education, Tri-College University.
The other three have an all-private membership.

b) Liberal arts-research university mixture: The Atlanta University Center, Five Colleges, the Pittsburgh Council on Higher Education, and Tri-College University have one or more members that are research universities. The New Orleans Consortium has an all-liberal arts college membership.

c) Special roles in higher education: The Atlanta University Center is the largest center for the higher education of black students in the nation. The Boston Theological institute has all-theological school membership.

The other basic criterion was that some "success stories" be included. The Atlanta University Center and Five Colleges met that criterion obviously. Both are well known in higher education for their academic interdependence and the extensive use that students make of educational opportunities at the affiliated institutions.

Selected Characteristics of the Six Consortia and Their Member Institutions

Consortium	Member Institutions	Sponsorship Affiliation	Degrees Conferred	1977-78 Enrollment	1976-77 Instructional Costs
Atlanta University Center	Atlanta University	Independent	Master's, Doctor's	1,117	$ 3,519,023
	Clark College	United Methodist	Bachelor's	1,776	2,542,645
	Interdenominational Theological Center	Six Protestant Denominations	Master's	227	390,006
	Morehouse College	Independent	Bachelor's	1,525	2,832,054
	Morris Brown College	African Methodist Episcopal Church	Bachelor's	1,673	1,854,239
	Spelman College	Independent	Bachelor's	1,276	2,121,832
Boston Theological Institute	Andover Newton Theological School	Independent Ecumenical (UCC/Amer Bapt)	Master's Doctor's	502	724,315
	Boston College Department of Theology	Independent Roman Catholic	Master's Doctor's	45	Not available for dept.
	Boston University School of Theology	Independent United Methodist	Master's Doctor's	257	Not available for dept.
	Episcopal Divinity School	Independent Episcopal	Master's Doctor's	119	604,863
	Gordon Conwell Theological Seminary	Independent Interdenominational	Master's	631	575,818
	Harvard Divinity School	Independent non-denominational	Master's Doctor's	356	Not available for dept.
	Holy Cross Greek Orthodox	Independent Greek Orthodox	Master's	78	335,297
	Saint John's Seminary	Independent Roman Catholic	No degree	145	206,742
	Weston School of Theology	Independent Roman Catholic	Master's Doctor's	121	Not available

Selected Characteristics (cont.)

Consortium	Member Institutions	Sponsoring Affiliation	Degrees Conferred	1977-78 Enrollment	1976-77 Instructional Costs
Five College, Inc.	Amherst College	Independent	Bachelor's	1,538	$ 4,761,346
	Hampshire College	Independent	Bachelor's	1,228	2,619,744
	Mount Holyoke College	Independent	Bachelor's	1,928	4,555,677
	Smith College	Independent	Bachelor's	2,526	7,702,781
	University of Massachusetts/Amherst	State	Bachelor's Master's Doctor's	23,953	42,093,071
New Orleans Consortium	Loyola University New Orleans	Independent Roman Catholic (Jesuit)	Bachelor's	2,386	3,760,204
	St. Mary's Dominican College	Independent Roman Catholic (Dominican)	Bachelor's	833	633,352
	Xavier University of Louisiana	Independent Roman Catholic (Sisters of the Blessed Sacrement)	Bachelor's	1,858	3,035,074
Tri-College University	Moorhead State University	State	Bachelor's Masters	5,913	6,781,428
	North Dakota State University	State	Bachelor's Master's Doctor's	7,881	10,741,201
	Concordia College	Independent American Lutheran	Bachelor's	2,595	4,024,898

Selected Characteristics (cont.)

Consortium	Member Institutions	Sponsoring Affiliation	Degrees Conferred	1977-78 Enrollment	1976-77 Instructional Costs
Pittsburgh Council on Higher Education	University of Pittsburgh	State	Bachelor's Master's Doctor's	29,444	$61,248,715
	Community College of Allegheny County	Local	Associate's	7,194	Not available
	Duquesne University	Roman Catholic	Bachelor's Master's Doctor's	7,457	8,372,503
	Carnegie-Mellon University	Independent	Bachelor's Master's Doctor's	4,935	15,874,286
	Robert Morris College	Independent	Bachelor's	3,943	2,283,485
	Point Park College	Independent	Bachelor's	1,808	1,865,215
	La Roche College	Roman Catholic	Bachelor's	1,075	569,215
	Carlow College	Roman Catholic	Bachelor's	903	848,794
	Chatham College	Independent	Bachelor's	578	1,267,450
	Pittsburgh Theological Seminary	United Presbyterian	MAster's	290	589,265

Methodology

In any cost effectiveness analysis, the method selected will depend on the purposes of the study, the nature of the program and the institution, and the data that can be provided for the analysis. To estimate the cost effectiveness of a program in higher education - an educational program, not a purely administrative program - requires some form of cost benefit analysis. And benefits are notoriously slippery concepts.

By the very nature of consortia as loosely-bound aggregates of colleges and universities, and by the very nature of the benefits which higher education provides to its students, there can be no "good" or "fully acceptable" approach to the measurement of the costs and benefits, and hence to the cost effectiveness associated with a program of cross-registration. The challenge of this study was to find a way or ways of showing in general what the cost effectiveness might be.

Three basic approaches have been used. All are simple, almost obvious, ways of looking at cross-registration programs. They are:

1. To array in a matrix the degree programs or fields of study offered by the member institutions of a consortium. This array shows the potential for study that exists because of the cross-registration program. The program has opened doors to students which their own institution could not open if it were isolated from the consortium.

2. To show the extent to which students use the program: course enrollments (or credit hours of enrollment) on the "other" campuses, and the percent of total registrations accounted for by cross-registration.

3. To estimate in dollar amounts both the costs of operating the program and the educational benefits which they provide, and to use the estimates to show the ratio of benefits to costs.

The first two approaches require only college bulletins and registration data which all colleges and universities can provide. The third approach, however, has taken the CIL/Carnegie Project into uncharted waters. This section of the report reviews the process used to narrow down the choices of methodologies to one which, it is hoped, provides a useful basis for developing the analysis of cross-registration programs.

Different ways of measuring the value of cross-registration in monetary terms have been considered. There is no way of estimating two kinds of value that are important: the value of cross-registration to the faculties and administrations of the institutions, and the value to the public at large including tax-payers, parents, and employers of graduates. The analysis in monetary terms had to be limited to a third kind, which is surely the most important of the three - the educational value received by the students.

The ideal method for measuring the value of cross-registration to students would be

1. To estimate the value that cross-registration courses add to the education of students who use the program, and
2. To reduce that amount by an estimate of the value that would be added by courses on the home campus that the students would enroll in if cross-registration did not exist.

The method, however, requires knowledge of educational outcomes that cannot be known in the present state of the art.

If, then, the CIL project was to retain its objective of measuring cost effectiveness in value terms while evaluating cross-registration programs, the methodology would have to be built around the only monetary data that could be made available, which are the budgets and accounting reports of the consortia and their member institutions. Because of that restriction, the methodology chosen would have to use revenues or expenditures, or both, as substitute measures for benefits. There is ample precedent for such a substitution in higher education studies.

Several methods of measuring the value of cross-registration were studied and discussed. Dr. Thomas O. James, drawing from studies published by the National Association of Colleges and University Business Officers, the National Center for Higher Education Management Systems, and the American Council on Education, interpreted for the CIL/Carnegie Project how cost analysis for college and universities might be used in the measurement of the costs and benefits of interinstitutional cooperative programs. His report is appended to this study. A draft of his report was circulated soon after the second team visit. By then it was clear that no accepted method for measuring costs and benefits had been developed which would serve the needs of the CIL/Carnegie study.

The several methods which seemed to hold some possibilities for analysis of cross-registration benefits are most easily explained through examples. They are:

1. The institutional costs of instruction allocated to courses in which there has been cross-registration.

Example:	Cost of instruction	$3,750,000
	Number of courses offered	1,250
	Cost per course	$3,750,000-1,250= 3,000
	Courses with cross-registration	150
	Value to students from cross-registration in those 150 courses:	$3,000 x 150 = $450,000

2. The institutional cost of instruction allocated to courses in which there has been cross-registration plus an allocation of supporting administrative costs.

Example:	Instructional costs	$3,750,000
	Supporting administrative costs	1,250,000
	Instructional cost plus supporting admin. costs	5,000,000
	Number of courses offered	1,250
	Cost per course $5,000,000 ÷ 1,250 =	4,000
	Courses with cross-registration	150
	Value to students from cross-registration in those 150 courses $4,000 x 150 =	600,000

3. The cost of the faculty salaries for teaching courses in which there has been cross-registration.

Example:	Average faculty salary	$18,000
	Average number of courses taught per faculty member	9
	Faculty salary per course $18,000 ÷ 9 =	2,000
	Number of courses with cross-registration during the year	150
	Value to students from cross-registration $2,000 x 150 x	300,000

4. The credit hour costs of cross-registration (calculated from cost per credit hour).

Example:	Instructional costs	$3,750,000
	Total credit hours of registration in departmental courses	93,750
	Cost per credit hour	40
	Credit hours of cross-registration	5,000
	Value to students from cross-registration $40 x 5,000 =	200,000

5. The credit hour costs of cross-registration (calculated cross-registration as a percent of the total).

Example:	Cost of instruction	$3,750,000
	Cross-registration as a percent of total registration	5.33
	Derived value of cross-registration $3,750,000 x 5.33% =	200,000

6. The tuition value of cross-registration.

Example:	Tuition per credit hour	$ 50
	Credit hours of cross-registration	5,000
	Value to students from cross-registration $50 x 5,000 =	250,000

All six methods would reflect correct costing techniques. The question was, which technique would give the most reasonable and most acceptable results to the officers of member institutions in consortia, especially at the six consortia being visited?

Team members were not aware of any attempts to measure cross-registration's value with the use of techniques 1 and 2. But some difficulties in getting acceptance of those two techniques could be foreseen. Both methods assume that the entire cost of offering courses reflects the value of those courses to students cross-registering for them. The underlying assumption is that if only one student cross-registers in a course which costs $3,000 (example in technique 1), then there are $3,000 worth of services being provided for that single student. If ten students cross-register in the course, the value of services is still only $3,000; it is not $30,000. This is sound from an institutional point of view since the course costs $3,000 regardless of the enrollment in it. It was felt that, since cross-registration is a small part of total registration in virtually any course, the results of these two techniques would give very high benefit values - too high to be acceptable.

Technique 3 was developed by Fritz Grupe and is outlined in detail in this chapter in the section immediately following the six case studies. Although the results of technique 3 would give estimated benefits that would be smaller than the benefits estimated with the use of techniques 1 and 2, the same conceptual difficulty would apply. The perspective is institutional, and the resulting value figures might not be acceptable because the dollar amounts assigned to cross-registration would account for too large a part of total institutional costs. Techniques 4 and 5 avaid that difficulty. Benefits are being measured from the student's perspective. If the cost of offering a course is divided by the credit hours of enrollment in a course, the costs are in effect being spread equally among the students registered in the course. Each student's benefits are equal to the allocation of costs made to him or her. The result would give a smaller value to cross-registration than the first three techniques. If cross-registering students account for 10% of the enrollment in a course, their benefits are valued at 10% of the costs of the course.

Technique 5 also avoids the difficulty of the first three techniques. The benefits received by each cross-registering student are measured by the tuition that the host institution would charge if there were no cross-registration program and the student were enrolling part-time for a course. While this technique would not have the difficulty of appearing to exaggerate benefits, there would be a problem in its use in consortia that include both public and private institutions. If a private institution's tuition rate is four times as large as a public institution's rate, do students cross-registering in one direction receive benefits that are four times the benefits received by students cross-registering in the other direction? They do if tuition is thought of as the price of the student's education and if price and value are considered synonomous. That concept, however, might trouble some readers. Moreover, the concept carries a suggestion of tuition charges for cross-registration whereas it is an axiom of all cross-registration programs that the student will pay no more than the home institution's tuition.

Technique 5 seemed to have the fewest difficulties, and it is the technique that was selected for analysis of the six consortia visited. As will be seen in the tables of the six case studies, cross registration has been calculated as a percent of total registration in an institution. The percent has then been multiplied against the total cost of instruction for the institution as shown in its accounting reports. If, for example, cross-registration accounts for 5.33% of all registrations and the direct costs of instruction are $3,750,000 the educational benefits received by cross-registering students are estimated to be $200,000. The calculation is made for each institution in a consortium, and the sum of the institutional amounts gives the estimated educational benefits received by all students who have used that consortium's cross-registration program.

Technique 6 was also tested, but the results have been included only for two of the case studies presented in this chapter.

The basic assumptions of the technique chosen, which is fundamental to the methodology, are:

1. Institutions which send and receive students for cross-registration and which do not exchange funds for cross-registration imbalances are bartering educational services.

2. The services bartered are a by-product of each institution's primary output, which is the provision of education to the "home" student.

3. The cost of producing the by-product is low. There are no costs in the classroom since there is rough parity between exports and imports of the bartered services, and since the program has not required an increase in the size of any faculty or any instructional program. The cost of the program is limited to program administration and, at a few consortia, the cost of an inter-campus bus system.

4. The value to the student from a cross-registered course is greater than the value of any course in which he or she might have registered on the home campus. Otherwise, the student would not bother with the considerable inconvenience of moving between campuses at least once and often three times a week.

5. There is no loss in the value of education offered by an instittution to its own students when some of them cross-register for courses at other institutions.

The last of the assumptions is debatable. It may be argued that when students forego registering in home institution courses so that they may cross-register elsewhere, there is a decline in the value of that institution's education to those particular students. If so, then cross-registration is reducing the value of an institution's education taken by its own students to the extent that they are failing to enroll at their own institution. Most institutional spokesmen, when questioned about this, felt that there was no such decline. One of them aptly compared cross-registration with enlarging the faculty and the course offerings of an institution. When there is such an enlargement, the value of the education in courses previously offered, provided they are still offered, does not decline.

The concept of the cost of administering a cross-registration program has posed no difficulty. The costs of administering the program were to be estimated at each consortium. The program costs should include costs at the consortium office which are appropriately allocated to the program; the on-campus costs which should be largely in the registrar's operations; and an allocation of indirect costs if the institutions make such estimates. The concept is simple, but collecting data on the costs of administering cross-registration programs turned out to be impossible at five of the six consortia visited. There are interesting reasons for that failure, which are not related to adequacy of accounting procedures and records. The barrier is in the philosophy of cross-registration as seen by the college and university presidents, and is reviewed in each case study.

Consortium: Atlanta University Center

Title of Program: Cross-Registration

Participating Institutions:

- Atlanta University
- Clark College
- Interdenominational Theological Center
- Morehouse College
- Morris Brown College
- Spelman College

Administrator: Dr. Charles W. Meredith, Chancellor
The Council of Deans and Registrars
Mr. William Henderson, Director of the
Administrative Data Processing Center

31

A. PROGRAM

The Atlanta University Center (AUC), founded in 1929 by Atlanta University, Morehouse College, and Spelman College, has since increased its membership to six institutions. It was issued a charter by the State of Georgia in 1964, creating a corporation which could receive monies on behalf of the member institutions. The first full-time staff was appointed in 1965. From a single program and an initial budget of $50,000 that year, the Center has grown to a staff of 100 persons administering 22 formal cooperative programs; providing leadership and assistance to faculty and staff of the institutions who are reviewing, developing, or establishing, cooperative programs; and operating with a $4 million current funds budget. In 1972, in a plan of reorganization prepared by the six Presidents, the Center's goal for strengthening cooperation were formulated and included:

- Maximize academic and instructional creativity and productivity;
- Minimize and eliminate unnecessary duplication in administration and instruction; and
- Achieve specialization and division of labor where possible.

Under the plan, a Chancellor would be appointed to administer Center-coordinated programs. Policy would be developed by a Council of six Presidents and the Chancellor, and the Board of Trustees of AUC would be reorganized under new by-laws.

The plan and new by-laws were adopted in 1973. Under the new organization, the AUC Board consists of the six Chairmen of the governing boards of the member institutions, six other Trustees of those boards, 12 independent Trustees (not affiliated with any of the member institutions), and ex officio the six Presidents and the Chancellor. The autonomy of the member institutions was not affected by the reorganization, but their interdependence with one another through AUC - a set of voluntary relationships - has grown rapidly since the reorganization. Policy for cooperative programs is developed by the Presidents and the Chancellor in their council, which is supported by other Center councils: the Deans and Registrars, the Business Managers, the Development Officers, the Directors of Institutional Research and Planning, the Director of Student Affairs, the Controllers, and the Admissions Officers. There are also interinstitutional faculty committees in some disciplines that meet regularly to plan cooperatively their academic programs. This voluntary cooperation in academic affairs is considered by many faculty to have high importance in maintaining the strength of the institutions' instructional and research programs.

An important feature of the new organization is its flexibility. Because cooperation may take the form of a bilateral agreement between any two institutions or it may involve as many as all six institutions, optimum use can be planned for available resources and educational opportunities without jeopardizing institutional autonomy.

There are two unique characteristics of the Atlanta University Center which should be noted. First, its creation and development embody the most ambitious cooperative undertaking of black institutions of higher learning. The Center is the largest center for the education of black students in the nation, and it is the largest private center for their education in the world.

In many ways, the Center exceeds mere access to the resources of the other member institutions of the consortium. The level of cooperation has progressed to a point where cross-registration, faculty exchange, and the taking of majors on other campuses are routine, common activities. Cooperation and interdependence have allowed the institutions to develop areas of specialization at a level not often found in small, private colleges. With specialization has come accreditation, national honors, distinguished alumni, and handsome grants.

There are tradeoffs, however. When an institution chooses specialization [illegible] breadth and opens access to that absent component for its students through agreements with other institutions, that institution sacrifices some of its administrative authority. It was mentioned several times during the site visit that probably no institution in the Center ventures out on its own without major academic consequences and budgetary dilemmas. The institutions closely guard their image as separate institutions. To prospective faculty, students, and outside funding agencies, they also point to the surrounding resources available in the Center as desirable and necessary. The cooperation is a mutual act of faith and trust which has accounted for much of the success of the individual institutions.

The motto of the Atlanta University Center - "Strength in Diversity" - is most visible in academic cooperation, the cornerstone of which is open cross-registration. In 1929-30, occasional students from Clark College and Morris Brown College began taking courses at Morehouse College (for men) and Spelman College (for women), which had even before then allowed their students to study at the other college. A combination of close physical proximity, joint academic planning, a pervasive sense of collegiality, and academic specialization are the primary factors that raised cross-registration to over 8,500 course registrations by 1977-78, accounting for 11% of the registrations at the six institutions.

Cross-registration is open. Any student may register for any course on any campus for which he or she has the academic prerequisites. It is possible, for example, for a Morehouse student to have all of his courses in a semester on campuses other than his own and yet remain a Morehouse student, working on a Morehouse degree, and paying only Morehouse fees. Further, he may earn his major degree in mass communications, which is offered only by Clark College.

In 1974, twenty Center-wide committees from single or closely-related disciplines were established by the Council of Presidents to explore the reducing of duplication and the designing of new cooperative programs. Center-wide planning, a continuous process, led to major revisions in Center-wide registration and pre-registration procedures, beginning in 1975. The following year, the first Center-wide master schedule of classes was published and a central bookstore for five of the institutions was opened.

In addition to selecting from an increasing variety of over 2,000 courses, students may choose from various unique majors that are offered on other campuses or from Center-wide degree programs: Computer Science, dual degree programs (bachelor's and master's conferred jointly on a student) between Atlanta University and the undergraduate institutions in Business (BA/MBA), Social Work (BA/MSW), and Religious Education (BA/M.Div). A Dual Degree Program in Engineering is offered jointly with the Georgia Institute of Technology, under which the student earns simultaneously a bachelor's degree from one of the four AUC colleges and a master's degree in engineering from Georgia Tech. More black students are enrolled in this program than in any other engineering program in the nation.

Cooperative and joint academic programs are the direct result of academic planning which takes a variety of forms. Some are by design and agreement that an institution will provide all or most of the offerings in an academic area. Some are Center-sponsored but are housed on a particular campus.

Cross-registration and reporting procedures for cross-registration are administered by the six Registrars using a Center-wide computer system operated by Administrative Data Processing Center. Over the years, the committee of registrars has worked to streamline the system to such an extent that there is no permission-to-cross-register form. The student simply goes to the campus where the course will be taught, obtains the appropriate computer card for the course, and files it with the other course cards during registration at his or her home campus. All course cards are punched at the central Administrative Data Processing Center, adding student information to each course card. All cards are then combined, sorted, and batched according to course enrollment and the home campus of each student in the course. A reverse process is used for reporting grades. The use of the central computer facilities for registration and reporting was designed to ease the problems of registration and generating grade reports. The system does require, however, an across-the-board adherence to deadlines for submission of course cards and grades by the institutions. Cooperation is required at all levels - professor, dean, and registrar - at all six institutions, and too frequently the operation is marred by failure in conforming to deadlines. The result can be Center-wide delays in registration and in reporting. The Council of Deans and Registrars continue to work toward the elimination of those problems.

B. CROSS-REGISTRATION BENEFITS

The philosophy of specialization, interdependence, and cooperation which is a hallmark of the Atlanta University Center is very visible when the academic programs of the member institutions are displayed. Table I shows the degree programs offered by each member institution. The programs for Atlanta University (AU) and the Interdenominational Theological Center (ITC) are all graduate programs. The other four members are the colleges, all of which offer four-year bachelor's degree programs but no graduate programs.

The four undergraduate colleges are all liberal arts colleges offering many curricula and academic programs that are similar in nature, but even within this framework the specialization is extensive. Only thirteen common majors, for example, are available at all four undergraduate colleges, which suggests that each college does not offer the full range of courses usually associated with the concept "liberal arts." The thirteen common curricula are:

Biology
Chemistry
Engineering
English
French
Health & Physical Education
History
Mathematics
Music
Political Science
Psychology
Religion
Sociology

Nine common majors are offered by three of the undergraduate colleges. In some instances, the lower division courses for a particular major are offered at one or more of the colleges while the upper division courses are offered at still another.

Accounting	Clark	Morris Brown	Morehouse
Art	Clark	Morris Brown	Spelman
Business Administration	Clark	Morris Brown	Morehouse
Child Development and Early Childhood	Clark	Morris Brown	Spelman
Economics	Morris Brown	Morehouse	Spelman
Elementary Education	Clark	Morris Brown	Spelman
Philosophy	Clark	Morehouse	Spelman
Secondary Education	Clark	Morris Brown	Spelman
Spanish	Clark	Morris Brown	Spelman

Ten major programs are offered only by two colleges.

Business Education	Clark	Morris Brown
Drama	Clark	Spelman
Early Childhood Education	Clark	Morris Brown
German	Clark	Morehouse
Home Economics	Clark	Morris Brown
Nutrition	Morris Brown	Spelman
Office Administration	Clark	Morris Brown
Physics	Clark	Morehouse
Social Welfare	Clark	Morris Brown
Special Education	Clark	Morris Brown

There is a trend towards one undergraduate college offering a major in a discipline not offered at any other college. Eighteen majors are offered at one college only.

Clark	Morehouse	Morris Brown	Spelman
Journalism	International Studies	Restaurant & Institutional Management	Child Development
Speech Communication	Caribbean Studies	Fashion Design	
Mass Communication	African Studies	Geography	
Medical Technology	Urban Studies	Criminal Justice	
Clinical Dietetics	Afro-American Studies		
Medical Illustration			
Medical Records Admin.			
Public Policy Studies			

Atlanta University and the Interdenominational Theological Center are responsible for all graduate and professional courses in the Atlanta University Center. Atlanta University offers master's degrees in twelve fields in which the undergraduate schools offer bachelor's degrees, as well as doctor's degrees in biology, chemistry, political science and education.

Biology
Chemistry
Early Childhood Education
Elementary Education
English
French
History
Mathematics
Political Science
Secondary Education
Sociology/Anthropology
Special Education

The presidents have designed academic cooperation and interdependence so that it is concentrated among juniors and seniors at the four undergraduate colleges. As they point out, there is ordinarily no advantage in freshmen and sophomores crossing campus boundaries to enroll in required courses. There is no advantage to the student unless all sections of a required course are closed or unless there is a scheduling conflict between open sections at his or her college. Nor is there advantage to the college in reduced costs of instruction since most lower division courses are offered in multiple sections, and the sections have been scheduled to meet student needs and to be largely filled to a predetermined capacity. At the Atlanta University Center the precepts of specialization and interdependence have as a premise that students receive a better education by having additional academic options that the limited resources of a small college cannot afford, and that there are empty seats in courses at other AUC institutions. Hence, the philosophy of interdependence includes the expectation that the fiscal condition of the colleges will not be adversely affected by cross-registration of undergraduate students at any level. Chief business officers and chief acadmeic officers believe that cross-registration's true effects are exactly what has been planned. Most undergraduate courses will accommodate students from the other campuses seeking entry. If there has been a net loss to any college in this large inter-campus movement, it is not recognized.

While the data in the central computer operation are organized so that cross-registration at the upper division level could be calculated easily, the information was not requested during the CIL site visit. It can be inferred, however, from the data in Tables II and III that about one-third of the course registrations by junior and seniors at Morehouse and Spelman Colleges are on other campuses, and about one-fourth or one-fifth of the registrations by juniors and seniors at Clark and Morris Brown Colleges are on other campuses.

As expected and planned, there is very little enrollment by the graduate students of Atlanta University and the Interdenominational Theological Center in the undergraduate courses of the four colleges (91 such course registrations in 1976-77, and 74 in 1977-78). See Tables II and III. Center policy encourages a flow in the other direction by permitting seniors at the colleges to enroll in graduate courses for which they are qualified, and by offering the dual degree programs (bachelor's and master's degree in five years) referred to above. Use of these options is small compared with the flows of undergraduates between the colleges: 2.8% of the total registrations in Atlanta University's graduate courses were by undergraduates from the colleges in 1976-77, and the figure for 1977-78 was 1.4%. It should be noted that these are low only by AUC standards. In most other consortia, if cross-registration rates are 1% to 3%, the program is considered to be a success and to be a valuable part of the curricula.

The Interdenominational Theological Center (ITC) offers a master's degree in theology. Few of its 240 students, who are all graduate students, find significant advantages in the courses of the other AUC institutions. Since its students account for only 3% of the AUC student bodies, the very small use of cross-registration at the ITC has no influence on the overall pattern and rates for AUC cross-registration.

Because upper division courses are so strong a drawing power for cross-registration, reflecting the design for academic interdependence among the AUC institutions, the aggregate rate for cross-registration at all AUC levels and for all six institutions is impressive. In 1976-77, it was 12.9%, and in 1977-78, it was 11.3%. That is a notable record for the full use of academic resources. Students use their options, and the education they receive must be substantially better than it would have been if the presidents and governing boards of the member institutions had lacked the vision to found and develop the Center to its present position.

C. COSTS OF CROSS-REGISTRATION

At the Atlanta University Center, as at the other consortia visited by CIL teams for study of cross-registration, the CIL representatives found no interest in estimating the costs of the program. There is no problem of inter-campus distance, and so there is no cost of transportation. Joint academic planning by presidents and deans requires time, but all of them see such activity as a part of their normal responsibilities; if they were not planning jointly, they would instead be spending more time planning individually for their own institution. For the registrars and their staffs, there is some additional work, but the registrars do not believe that their costs could be reduced if cross-registration were to cease. There is evidence to support this in the two graduate institutions, which have little cross-registration activity. It is thought that the registrar's offices at Atlanta University and the ITC are as expensive to operate, given the sizes of those two institutions, as the comparable offices at the four undergraduate colleges.

There are costs of academic planning by the Center staff associated primarily with the Provost's Office and secondarily with the Office of Institutional Research and Planning - both of which are located in the AUC central administration. Those costs, however, are not direct costs of cross-registration. They are classified as indirect costs to this function and CIL teams have not undertaken the difficult and thankless tasksof measuring indirect costs in any of the consortia being evaluated.

Table I

Major Degree Programs
Atlanta University Center

Program	Atl. Univ.	Clark Col.	ITC	More-house Col.	Morris Brown Col.	Spel-man Col.
Afro-American Studies	X			X		
Allied Health		X				
Art		X			X	X
Biology	X	X		X	X	X
Business Admin.	X	X		X	X	
Business Ed.		X			X	
Chemistry	X	X		X	X	X
Dance						X
Drama/Speech		X				X
Economics	X			X		X
Education	X	X		X	X	X
Engineering		X		X	X	X
English	X	X		X	X	X
French	X	X		X	X	X
German		X		X		
History	X			X	X	X
Home Economics		X				
Hospitality Mgt.					X	
Human Resources					X	
Journalism		X				
Library Service	X					
Mass Communication		X				
Math	X	X		X	X	X
Military Science				X		
Music		X		X	X	X
Philosophy		X		X	X	X
Physical Ed/Health		X		X	X	X
Physics		X		X		
Political Science	X			X	X	
Public Admin.	X					
Psychology		X		X	X	X
Reading				X	X	
Religion		X		X	X	X
Russian				X		
Social Science		X			X	
Social Work	X					
Sociology	X			X		X
Spanish	X	X			X	
Swahili				X		
Theology			X			
Urban Studies				X		
Computer Science (Center Program				X		
Cooperative General Science (Center Program)		X				

Table II

Registration by Institution in 1976-77
Atlanta University Center
(Course Registration)

FROM ↓ TO →	Atl. Univ.	Clark Col.	ITC	More-house Col.	Morris Brown Col.	Spel-man Col.	Total Cross-Reg.
AU	7,690	15	0	51	3	22	91
CC	87	14,906	0	513	236	558	1,394
ITC	13	2	2,218	3	2	0	20
MH	43	976	0	13,658	371	1,711	3,101
MB	30	883	0	375	14,331	248	1,536
SC	49	812	0	2,007	358	11,237	3,226
Total Cross-Reg.	222	2,688	0	2,949	970	2,539	9,368
Total	7,912	17,594	2,218	16,607	15,301	13,169	
% Cross-Reg.	2.8	15.3	0.0	17.8	6.3	19.3	12.9

Total Registrations: 72,801

Table III

Registration by Institution in 1977-78
Atlanta University Center
(Course Registration)

FROM ↓ TO →	Atl. Univ.	Clark Col.	ITC	More-house Col.	Morris Brown Col.	Spel-man Col.	Total Cross-Reg.
AU	7,596	5	0	34	5	30	74
CC	61	14,736	0	453	332	337	1,183
ITC	7	1	2,495	5	8	0	21
MH	9	1,283	0	14,342	349	1,380	3,021
MB	8	921	0	328	16,024	193	1,450
SC	23	959	0	1,503	314	11,722	2,799
Total Cross-Reg.	108	3,169	0	2,323	1,008	1,940	8,548
Total	7,704	17,905	2,495	16,665	17,032	13,662	
% Cross-Reg.	1.4	17.7	0.0	13.9	5.9	14.2	11.3

Total Registrations: 75,463

Table IV

Derived Value of Cross-Registration in 1976-77
Calculated from Instructional Costs
Atlanta University Center

	Percent of Cross-Registration "into"	Instructional Costs	Derived Value Cross-Registration
Atlanta University	2.8	$3,519,023	$ 98,535
Clark College	15.3	2,542,645	389,025
Interdenominational Theological Seminary	0.0	390,006	-0-
Morehouse College	17.8	2,832,054	504,106
Morris Brown College	6.3	1,854,239	116,817
Spelman College	19.3	2,121,832	409,514
Total Value			$1,517,997

Consortium: Boston Theological Institute

Title of Program: Cross-Registration

Participating Institutions:

- Andover Newton Theological School
- Boston College Department of Theology
- Boston University School of Theology
- Episcopal Divinity School
- Gordon-Conwell Theological Seminary
- Harvard Divinity School
- Holy Cross Greek Orthodox Seminary
- St. John's Seminary
- Weston School of Theology

Administrator:

Mr. John W. Turnbull, Director, Boston Theological Institute.

A. Program

A conversation between officers of a Catholic seminary and a Protestant theological school during a return flight to Boston in 1966 initiated movement toward the formation of the Boston Theological Institute. In January 1968, after two years of planning, the Institute came into existence with a membership of seven institutions. Gordon-Conwell Theological Seminary became the eighth in 1972, and Holy Cross Greek Orthodox Seminary the ninth in 1975. The Institute was founded to combine the resources of the institutions into an "ecumenical educational agency" that would strengthen their education programs and initiate new programs. The purpose clause of the Articles of Incorporation reads:

> The purpose of the Corporation is to facilitate cooperation among theological seminaries and other institutions of higher education and research and to initiate programs and furnish and coordinate resources and opportunities for clergymen and lay persons to pursue education and research in subjects of concern to religious bodies in cooperation with existing educational and other institutions.

Among the Institute's original programs of 1968 was cross-registration. In keeping with the denominational and ecumenical character of the member instituitions, cross-registration not only enlarges academic opportunity but opens doors for interdenominational discussion and understanding.

The primary objective of the cross-registration program is to enlarge student possibilities in the selection of courses. Its content is determined largely by the students. Although it is used more for elective than required courses, a formal doctoral program offered jointly by Andover Newton and Boston College is built upon cross-registration, and there is cooperative planning for core courses that requires cross-registration between Weston, Harvard, and the Episcopal Divinity School. Academic cooperation and coordination is rather informal: discussion may result in a student's taking a course on another campus; a few professors may meet to discuss their course schedules.

The program has several distinctive characteristics. One is in the nature of the institutions. All offer instruction only at the graduate level, preparing men and women for professional careers in religion for the ministry and education. Seven of the nine institutions have a denominational affiliation, but all of them have a commitment to teach the traditions of the Church as reflected in other denominations. Cross-registration provides an excellent vehicle for this.

Another distinctive characteristic reflects the nature of the curricula. Many of the courses offered on one campus are also offered on other campuses, but with differing emphases, and study at more than one institution gives a special vitality to a course of study that one institution cannot provide alone. Each has its specialized curricula that are open to students from all institutions. Through cooperation, some duplication of offerings is avoided, permitting resources to be concentrated in specialized areas. The academic resources are used more fully and more effectively through joint planning which staggers or alternates similar courses on different campuses, and through faculty exchange and team teaching.

A third characteristic is the unusual attributes of the students. All are graduate students and most of them are older than students in other consortia. Because they are mature and highly motivated, the initiative for using cross-registration is primarily theirs, not the faculty's, and their use of the program is extensive at most of the institutions. The Director of the Institute characterizes the program as a "cafeteria operation," in part because the sampling of courses by students is extensive. This characteristic explains why the program in used more frequently than is typical of cross-registration programs elsewhere.

Administration of the program is decentralized. Governance, policy, procedures, requirements, pre-requisites, examinations, and other administrative matters are determined by the host institution. Approval is obtained from the home Registrar and a signed cross-registration form is presented to the Registrar at the host campus for approval and admission to a course. The only restriction is that no more than 50% of a student's degree program may consist of cross-registration courses.

There is no exchange of funds among the institutions, and no additional tuition is charged to the students. The program was initiated for the expanded opportunity it would give to students and for the efficient uses of resources; it was not to generate additional revenue. Cross-registration is believed to have reached a plateau. A number of factors mitigate against its further expansion. Most frequently mentioned are the lack of geographic proximity and problems of transportation and parking, with loss of scarce time for students. Cross-registration is highest within subsets of institutions with geographic proximity. It was also reported that on some campuses there are subtle pressures for students to take most courses at their home institution.

Policy is determined by the Institute's Board of Trustees, usually on the recommendation of the General Policy and Planning Committee. In 1977, the executive committee approved two recommendations that are expected to strengthen the program. The first calls for a closer agreement of calendars for opening, closing, and examination dates. The second is on scheduling: "insofar as possible, those courses for which cross-registration is desired

- meet once or, at most, twice a week

- ordinarily be scheduled for late afternoon or evening."

Information on cross-registration is printed in the joint BTI Catalogue. Few references are made to the program in the BTI Handbook, which reflects the informal nature of the program's operation.

B. Costs of Cross-Registration

The only costs recorded for cross-registration are the costs of printing cross-registration forms and the BTI Catalogue. Whatever the costs of operating the program on the campuses might be, there is no interest in estimating them. Here again the informal nature of the program is stressed.

C. Benefits of the Program

One of the approaches used by CIL teams in evaluating cross-registration programs has been to prepare a table showing the degree programs by major or the fields of study offered by each of the member institutions. For the Boston Theological Institute, the array of theological fields is shown in Table I. Some of the program's value to students can be seen in the Table. Aramaic is offered only by Boston University's School of Theology. Archeology or epigraphy are offered by theological faculty only at four institutions. Historiography and the philosophy of history are offered by the theological faculty at only three institutions. There are similar dispersions of offerings in several other fields. The faculties are small; their members are productive scholars - many are distinguished theologians - who offer few courses during the year.

Probably of greater value to students is the diversity of offerings within individual fields that the program opens to the students. The richness of the diversity and its educational significance cannot be captured in tables or even in the writing of a report such as this. The CIL team regrets that limits of time prevented CIL representatives from attempting to understand and to report on the wealth of educational opportunities created by the program, for there is no question but that this wealth is the program's most distinctive feature. Without such an understanding, this report can be no more than a shadow report on the program's educational value.

The CIL team found that the Boston Theological Institute was less well suited for analysis of cross-registration with use of the CIL methodology than were the other consortia visited. The Institute's distinctive characteristics - distinguished graduate faculties, highly motivated and capable graduate students, the small size of the institutions, their geographic dispersion in a large metropolitan area - call for a different sort of analysis. One could not be developed adequately in short visits to the campuses and the Institute's office.

One measure of cost effectiveness used at the six consortia, however, does give an interesting view of the operation and the effectiveness of cross-registration at the Institute: Tables II and III show registration, including cross-registration, at each member institution in 1976-77 and 1977-78. Compared with most consortia on which the CIL teams have information, including some that are not reported on in this study, the cross-registration rates, shown on the last line of each table, are extremely high. It interests the team that the rates are so high even though the problems holding down cross-registration - geographic dispersion, transportation, parking, scheduling - are severe. At most of the consortia visited by the teams, such problems would have held cross-registration rates to far lower levels.

D. Evaluation of Cost Effectiveness

Table IV is an attempt to derive a dollar value for the program, but it is not a useful table. Only five of the nine institutions could supply instructional costs, and two of the "missing" figures are for institutions which are among the most heavily enriched in cross-registration. Furthermore, even if the Tabel were complete, a monetary estimate might well have little meaning at this consortium because of its special character. A basic issue is whether instructional costs as shown on the books of these institutions (or of their universities) are in fact a reasonable measure of educational benefits to students, whether in cross-registration or home registration. Further work would be required to resolve such an issue, and the officers who direct the program have no interest in such issues of costs and benefits. They know the program has high value and that its costs are negligible.

Table I

Field of Study by Member Institutions
Boston Theological Institute

	AN	BC	BU	EDS	GC	HDS	HC	SJ	WS
I. Biblical Studies									
A. Old Testament	X	X	X	X	X	X	X	X	X
B. New Testament	X	X	X	X	X	X	X	X	X
C. Languages									
1. Aramaic			X						
2. Hebrew	X		X	X	X	X			
3. Greek	X		X	X	X	X		X	
4. German						X			
5. French						X			
D. Archeology & Epigraphy			X		X	X	X		
II. History									
A. Historiography & Philosophy of History			X	X		X			
B. Early Church, Patristics	X	X	X	X	X	X	X	X	X
C. Medieval	X	X	X			X	X	X	X
D. Reformation	X	X	X		X	X		X	
E. Modern	X	X	X	X	X	X	X	X	
F. American	X	X	X	X	X	X	X	X	
III. Theology & Philosophy of Religion	X	X	X	X	X	X	X	X	X
IV. Religion & Society									
A. Social & Theological Ethics	X	X	X	X	X	X	X	X	X
B. Sociology of Religion		X	X		X	X			
C. World Religions	X			X		X		X	X
V. Ministry in Church & Society									
A. Church Polity, Ministry	X		X	X	X	X	X	X	X
B. Counseling, Psychotherapy, Psy of Religion	X		X	X	X	X	X	X	X
C. Missions, Missiology, Ecumenics	X				X		X		X
D. Preaching/Communication	X		X	X	X	X	X	X	X
E. Religion & the Arts	X	X	X		X	X	X	X	
F. Religious Education	X	X	X	X	X	X	X	X	
G. Sacraments, Liturgy, Spiritual Formation, Worship	X	X	X	X			X	X	X

Note: AN - Andover Newton Theological School. BC - Boston College Department of Theology. BU - Boston University School of Theology. EDS - Episcopal Divinity School. GC - Gordon-Conwell Theological Seminary. HDS - Harvard Divinity School. HC - Holy Cross Greek Orthodox Seminary. SJ - St. John's Seminary. WS - Weston School of Theology.

Table II

Registration by Institution in 1976-77
Boston Theological Institute
(Course Registrations)

FROM ↓ TO →	AN	BC	BU	EDS	GC	HDS	HC	SJ	WS	TOTAL CROSS REGIS.
AN	2,927	27	25	31	8	18	1	2	18	130
BC	21	390	2	4	0	11	1	12	10	61
BU	41	9	1,326	15	3	39	0	8	12	127
EDS	14	5	3	912	0	61	1	2	129	215
GC	10	7	12	10	2,686	7	0	1	20	67
HDS	26	16	17	85	3	2,040	9	6	44	206
HC	1	4	2	0	0	2	733	5	0	14
SJ	24	41	9	25	0	8	12	1,463	32	151
WS	5	17	3	46	0	43	12	5	1,120	131
TOTAL CROSS REG.	142	126	73	216	14	189	36	41	265	1,102
TOTAL	3,069	516	1,399	1,128	2,700	2,229	809	1,504	1,385	
% IN CROSS REG.	4.6%	24.2%	5.2%	19.1%	0.5%	8.5%	4.4%	2.7%	19.1%	7.5%

Total Registrations: 14,739

Note: See Table I for names of the institutions.

Table III

Registration by Institution in 1977-78
Boston Theological Institute
(Course Registrations)

FROM ↓ TO →	AN	BC	BU	EDS	GC	HDS	HC	SJ	WS	TOTAL CROSS REGIS.
AN	2,882	25	23	19	15	26	2	33	20	163
BC	33	404	7	2	4	10	3	18	18	95
BU	36	3	1,245	16	8	21	2	2	12	100
EDS	22	2	5	817	4	100	9	4	74	220
GC	18	2	6	6	2,634	8	2	1	3	46
HDS	66	21	34	92	11	2,090	3	2	43	272
HC	0	3	1	1	0	4	765	8	4	21
SJ	35	35	10	6	0	11	1	1,428	24	122
WS	7	24	2	48	1	98	0	10	1,043	190
TOTAL CROSS REGIS.	217	115	88	190	43	278	22	78	198	1,229
TOTAL	3,099	519	1,333	1,007	2,677	2,368	787	1,506	1,241	
% IN CROSS REGIS.	7.0%	22.1%	6.6%	18.9%	1.6%	11.7%	2.8%	5.2%	16.0%	8.5%

Total Registrations: 14,537

Note: See Table I for names of the institutions.

Table IV

Derived Value of Cross-Registration in 1976-77
Calculated from Instructional Costs
Boston Theological Institute

	Percent of Cross-Registration "into"	Instructional Costs	Derived Value Cross-Registration
Andover Newton	4.6%	$724,315	$ 33,318
Boston College	24.4%	Not available for department	
Boston University	5.2%	Not available for department	
Episcopal Divinity School	19.1%	604,863	115,529
Gordon-Conwell	0.5%	575,818	2,879
Harvard Divinity School	8.5%	Not available for department	
Holy Cross	4.4%	335,297	14,753
Saint John's	2.7%	206,742	5,582
Weston	19.1%	Not available	

Consortium: Five Colleges, Inc.

Title of Program: Cross-Registration

Participating Institutions:

- Amherst College
- Hampshire College
- Mount Holyoke College
- Smith College
- University of Massachusetts at Amherst

Administrator: Mr. E. Jefferson Murphy, Coordinator

A. PROGRAM

Cooperation among the colleges of the Connecticut River Valley began soon after their founding. Amherst College, Mount Holyoke College, and Smith College -- among the oldest and most selective institutions of higher learning in the United States -- were founded in 1821, 1837, and 1871 respectively. The early social and academic interaction between Amherst College for men, and Mt. Holyoke and Smith Colleges for women, was informal. The addition of the University of Massachusetts, originally a land grant institution, made possible an interaction between public and private higher education in the State. In 1965, their cooperative arrangement was incorporated as Four Colleges, Inc., and with the creation of Hampshire College in 1966, the articles of incorporation were amended and the name was changed to Five Colleges, Inc. Hampshire College was founded on the desire of the four institutions to have a non-traditional educational unit among the member institutions.

Cooperation is viewed as a means toward strengthening the individual institutions "...by helping each do what it wishes to do but cannot do - or cannot do so well - within the limits of its own resources. ...The problem each step of the way is to determine how much institutional autonomy is to be given up to make cooperation work in the interest of each institution without undermining the independence or viability of that institution." (North Burn, Five Years with Five Colleges). Through the identification of areas of specialization, joint interests, and overlap, the institutions jointly plan for course offerings, joint departments, faculty recruitment, replacement, and sharing, sharing of administrative resources, and any other operations of mutual concern.

The possibilities for academic cooperation are seen most dramatically in new program areas. The Joint Department of Astronomy has a faculty and facilities that no single institution could support. Its cooperative organization has contributed to successes in attracting faculty, students, and financial support. Black Studies is another example of a recent need for program expansion that has been more effectively developed as a joint venture.

Academic planning can lead to the phasing out of programs to conserve resources without loss in academic programs. "Each institution is kept informed of what is happening at the others and can take course offerings planned at the other institutions into account in considering its own. Thus, Amherst College decided last year (1971-72) that it would no longer offer Italian. This year as many Amherst students are taking Italian at other colleges as used to take it as Amherst. The College has not lost Italian but is able to use the resources which otherwise would have gone into Italian for other purposes." (North Burn, Five Years with Five Colleges).

The availability of courses on other campuses helps both the institutions and students achieve their academic goals. "The chief aim of cooperation is not so much to 'save money' as to enable each institution, with its limited resources, to provide the best possible education for its students and wider intellectual opportunities for its faculty. Although money may be saved in one area, it is saved in order to be applied more fruitfully to another." (Ibid).

Students have a vast array of courses to choose from, and strong support systems assist them in use of those opportunities. Students are encouraged to shop for courses to complement course offerings on their home campus. A bus system moves over 780,000 passengers annually throughout the five campuses for academic, cultural, and social activities. Students may even purchase a meal contract to have their meals on any of the campuses. Such support services including access to library holdings of over 3,000,000 volumes, provides a distinctive environment rich in opportunities for students and faculty.

Cross-registration at Five Colleges became an informal program in the 1930s. In 1962-63, the first year in which records on it were kept, students took 254 courses on other campuses. Within ten years, the number had grown to more than 5,238 course registrations. Cross-registration has reached a plateau, at slightly over 6,000 courses annually, in the past four years.

An effective bus system has raised interaction among the campuses immensely. In 1971-72, 233,000 passengers rode the Five College buses. In 1977-78, there were 780,269 passengers - faculty, students, and administrators who moved from campus to campus to take classes, teach classes, attend meetings and concerts, and just to visit.

Students pay no additional fees for cross-registration, except for laboratory and special fees. To register, they complete a four-copy application form for course exchange, secure the required permissions, and file the form with the registrar at their home institution. The registrars report that the system is rapid and efficient. Differences in the institutions' schedule cause problems. Smith College, for example, is on an uneven class schedule with variable days and meeting times which frequently conflict with the more conventional Monday-Wednesday-Friday and Tuesday-Thursday schedules of the other campuses. A survey on Five College cooperation was conducted in 1978 by Melissa Soule, a senior at Mount Holyoke College. She found that for 63% of the non-Smith students schedule differences had no effect on their cross-registering for courses; however, 66% of the Smith students indicated that schedule differences discouraged them from cross-registering on the other four campuses. ("Five College Survey: Two Views," Five College Newsletter, Vol. X, Number 3, December 1978).

Five Colleges Inc. provides a wide variety of publications on cooperative programs. A joint calendar of events is published monthly. Information on cross-registration policies and procedures is published in the course schedules on each campus. Over two dozen disciplines have jointly issued publications describing their courses, faculty, and facilities at the five institutions. These publications not only expedite the advising process, but are used in recruiting faculty and students.

The administration of cross-registration is primarily a responsibility of the registrars. The system is well established. The flow of data on registration, the dropping and adding of courses, grade reporting, and graduation requirements moves rapidly among the campuses with remarkably few problems.

Mount Holyoke's Self-Study of 1977 included interesting information on the use of cross-registration by its students. Two tables from a working paper for that report are reproduced below, showing a trend of increased use. One-half of the Class of 1973 had used the programs, and most of the students had taken from one to four courses on other campuses during their four years at Mount Holyoke. In the Class of 1976, 71% had used the program and significantly more graduating students had taken four or more courses on the other campuses during their four years than had members of the Class of 1973.

The Number of Five College Courses
Taken by Members of Mount Holyoke's Classes of 1973-1976

	Class of 1973	Class of 1974	Class of 1975	Class of 1976
No Courses	243	214	152	142
1 Course	89	109	117	130
2 Courses	66	63	81	71
3 Courses	41	41	47	48
4 Courses	20	21	29	41
5 Courses	9	15	23	27
6 Courses	6	13	11	12
7 Courses	6	5	3	8
8 Courses	5	4	4	4
9 Courses	2	0	4	8
10 Courses	0	1	0	3
11 Courses	0	0	0	1
12 Courses	0	0	1	0
	486	487	472	495

Relative Participation of Mount Holyoke Students
in Course Interchange
Classes of 1973-1976

Courses Taken	Class of 1973	Class of 1974	Class of 1975	Class of 1976
None	50%	44%	32%	29%
At Least				
1	50%	56%	68%	71%
2	32%	34%	43%	45%
3	18%	20%	26%	31%
4	10%	12%	16%	21%
Class Size	486	487	472	495

Amherst College conducting its self-study in 1978, also included Five Colleges cooperation as one of its priority programs. For some years Amherst has been the largest importer of exchange students, exceeding even the University of Massachusetts. The use of cross-registration by the Amherst Class of 1976 revealed that 44% of the class had the equivalent of one semester or more supplied by Five College Interchange courses in a sample of 222 graduates, and 11 % had the equivalent of a full year, i.e., eight courses or more. (Amherst College Self-Evaluation in Preparation for Review by a Visiting Committee, 1978).

The benefits of the course exchange are clearly stated in the report of the committee: "Because the whole system of interchange runs on reciprocal willingness to admit students from other colleges to courses which might be fully subscribed on the home campus, it is of interst to note that Amherst students enrolled in between 290 and 350 different courses at one or the other institution in the Valley during the four semesters of 1975-76 and 1976-77. This number exceeds by one-third the total number of courses of red on the Amherst campus."

B. BENEFITS

The expansion of a student's educational opportunity through cross-registration may be in entire program areas not offered by the home institution, or it may be in individual courses not offered at the right time or not offered at all by the home institutions.

Because of the unusual even unique complexity of relationships among the Five Colleges and the educational importance placed on cross-registration (known on these campuses as Course Interchange), the CIL representatives have not attempted to interpret the abundance of in-house studies and publications on cooperation which they were given. The organization and management of cooperative relationships and cooperative programs is impressive. There is a spirit to Five Colleges cooperation that is unusual, and which may be a heritage of the colleges' distinguished role in higher education that goes far back in the nineteenth century.

The remainder of this case study simply presents the data that have been organized with the use of the methodology described earlier in this chapter.

Table I, on the following pages, gives some idea of the wealth of educational opportunities which students are encouraged to use. Some of the fields involve only graduate study, or primarily graduate study, at the University and are not an opportunity for most undergraduate students. Those are the exceptions; they are few.

Tables II and III show the rates of use of the program in 1976-77 and 1977-78. Cross-registration of students from the other campuses "into" each of the four colleges is very high by national standards, from 5.1% for registration "into" Smith College each year to 11.6% for registration "into" Amherst College in 1977-78, and 12.7% "into" Amherst in 1977-78. Cross-registration "into" the University was 0.8% of total University registration each year, and the reverse flow of cross-registration "from" the University to the

Table I
Academic Programs
Five Colleges

	Institution				
Program Area	Amherst	Hampshire	Holyoke	Smith	U Mass
American Studies	X	X	X	X	
Art	X	X	X	X	X
Astronomy	X	X	X	X	X
Anthropology	X	X	X	X	X
Agriculture		X			X
Afro-Amer. Studies	X		X	X	X
Ancient Studies				X	
Asian Studies	X				X
Accounting					X
Aerospace Engr.					X
Agriculture & Food Economics					X
Agricultural Engr.					X
Air Science					X
Animal Science					X
Arabic					X
Armenian					X
Biology	X	X	X	X	
Biochemistry			X	X	X
Botany		X			X
Biophysics	X				
Chemical Engr.					X
Civil Engr.					X
Computer Science Engineering					X
Chemistry	X	X	X	X	X
Classics	X		X	X	X
Complex Organizations			X		
Cultural History		X			
Communications		X			X
Communications Technology		X			
Computer Science		X			X
Child Study				X	
Chinese				X	X
Comparative Lit.				X	X
Communicative Disorders					X
Dance		X	X	X	
Design		X			
Deaf Education				X	
Danish					X
Dutch					X
Environmental Science					X
Environmental Health					X
Economics	X	X	X	X	X
Education	X	X	X	X	X
English	X		X	X	X
Engineering				X	

			Institution		
Program Area	Amherst	Hampshire	Holyoke	Smith	U Mass
European Studies	X				
Electrical and Computer Engr.					X
Entomology					X
Environmental Design					X
Film		X			
Franch	X		X	X	X
Finance					X
Fisheries Biology					X
Food Economics					X
Food Science and Nutrition					X
Forestry and Wild Life Management					X
Geography			X		X
Geology	X	X	X	X	X
German	X		X	X	X
Greek	X		X	X	X
General Business					X
History	X	X	X	X	X
Health and Hygiene			X		
Hotel, Restaurant, And Travel Admin.					X
Hispanic-American Studies		X		X	X
Human Development		X			X
History of Science		X			
Hebrew				X	X
Health Laboratory Science					X
Home Economics					X
Italian			X	X	X
Industrial Engr.					X
Journalism		X			X
Judaic Studies					X
Japanese				X	X
Latin	X		X	X	X
Latin American Studies	X		X		X
Literature		X			
Linguistics	X	X			X
Law (Legal Studies)	X	X			
Landscape Architecture					X
Leisure Studies					X

	Institution				
Program Area	Amherst	Hampshire	Holyoke	Smith	U Mass
Mathematics	X	X	X	X	X
Military Science					X
Medical Technology					X
Marine Science					X
Management					X
Music	X	X	X	X	X
Mass Communications		X			
Microbiology		X		X	X
Marketing					X
Mechanical Engineering					X
Neuroscience	X			X	
Natural Resources					X
Near Eastern Studies					X
Nursing					X
Operations Research					X
Philosophy	X	X	X	X	X
Physical Education	X	X	X	X	X
Physics	X	X	X	X	X
Political Science	X	X	X	X	X
Psychobiology			X		
Psychology	X	X	X	X	X
Philosophy of Religion		X			
Photography		X			
Portuguese				X	X
Park Administration					X
Persian					X
Polish					X
Plant and Soil Science					X
Plant Pathology					X
Public Health					X
Religion	X		X	X	
Russian	X		X	X	X
Regional Planning		X			X
Rhetoric					X
Sociology	X	X	X		X
Spanish	X		X	X	X
Science and Public Policy		X			
Statistics		X			X
Social Work				X	
Slavic Languages					X
Soil Science					X
Soviet and Eastern European Studies					X
Swahili					X
Swedish					X

Program Area	Amherst	Hampshire	Holyoke	Smith	U Mass
		Institution			
Theatre Arts	X	X	X	X	X
Television		X			
Textiles and Clothing					X
Turkish					X
Urban Studies		X	X		
Veterinary and Animal Science					X
Writing		X			
Women's Studies	X				
Wildlife Biology					X
Wood Technology					X
Zoology					X

colleges was even smaller both years. This characteristic of the rate of cross-registration and the size of the student body having an inverse relationship was found at all of the consortia that have been evaluated. Larger universities have a life of their own. They are more of an enclave for their students than are small colleges which are near other colleges and universities or which have established a formal relationship with other institutions.

Table II

Registration by Institution in 1976-77
Five Colleges
(Course Registration)

TO- FROM	Amherst	Hampshire	Holyoke	Smith	U Mass	Total Cross-Registrations
Amherst	10886	75	346	377	301	1099
Hampshire	356	6291	274	375	491	1496
Holyoke	463	162	14805	122	529	1276
Smith	478	71	72	21270	383	1004
U Mass	275	456	224	262	205218	1217
U Mass (Graduate)	15	5	10	13	0	43
TOTAL CR	1587	769	926	1149	1704	6135
TOTAL INSTITUTION	12473	7060	15731	22419	206922*	
% CR	12.7	10.9	5.9	5.1	0.8	2.3

Total Registrations: 264,605

*derived figure reached by dividing total credit hours generated by an average of 3 hours per course registration

Table III

Registration by Institution in 1977-78
Five Colleges
(Course Registration)

TO FROM	Amherst	Hampshire	Holyoke	Smith	U Mass	Total Cross-Registrations
Amherst	11101	103	252	277	408	1040
Hampshire	344	6246	286	423	447	1500
Holyoke	405	114	14566	111	469	1099
Smith	444	69	53	19707	361	927
U Mass	263	401	195	248	203180	1107
U Mass (Graduate)	3	15	9	9	0	36
TOTAL CR	1459	702	795	1068	1685	5709
TOTAL INSTITUTION	12560	6948	15361	20775	204865*	
% CR	11.6	10.1	5.2	5.1	0.8	2.2

Total Registrations: 260,509

*derived figure reached by dividing total credit hours generated by an average of 3 hours per course registration

Tables IV and V give value estimates for the program. The assumptions underlying the estimates are reviewed in the section on methodology. The estimates in Table IV appear preferable to the estimates in Table V. In Table V, the low value for the University's provision of education to students "from" the colleges is deceptive. It is the result of the in-state tuition rate being set at about one-seventh to one-ninth of the colleges' tuition rates. It marks the significance of the University courses for the colleges' students, which can be seen clearly in the last line of Tables II and III. The University receives "from" the colleges more students than any of the colleges receive "from" the other institutions.

Table IV
Value of Cross-Registration as a Percentage of the
Cost of Instruction : 1976-77

Institution	Percentage CR - 1976-77	Cost of Instruction	Derived Value of Cross-Registration
Amherst	12.7	$ 4,761,346	$ 604,691
Hampshire	10.9	2,619,744	285,552
Mt. Holyoke	5.9	4,555,677	268,785
Smith	5.1	7,702,781	392,842
U Massachusetts	0.8	42,093,071	336,745
Total value			$1,888,615

Table V

Value of Cross-Registration in Terms of
Part Time Cost Per Credit Hour: 1976-77

Institution	Instruction Provided	Cost	Potential Cost to Students without CR
Amherst	1587 courses	$495/course	$ 785,565
Hampshire*	769 courses	$400/course	307,600
Mt. Holyoke	3590 credits	$110/credit	394,900
Smith	1149 courses	$475/course	545,775
U Mass	6318 credits	(avg) $17.25/hour	108,986
Total Cost Saved			$2,142,826

*Hampshire does not have part time students but in the event that an exception is made for external part time students, the cost is $400 per course.

C. EVALUATION OF COSTS AND BENEFITS

For reasons found in other consortia visited and reviewed in those case studies, no estimates have been made on the costs of cross-registration apart from the cost of the bus service, which was $260,000 in 1977-78. Data at the colleges suggest that about 55% of the bus riders are changing campuses to attend classes.

The Course Interchange program has benefits that are many times as large as the program's costs. The estimates in Tables IV and V show this beyond question even without full cost estimates and the CIL representatives believe that the estimates do not reflect fully enough the value which the programs have for Five College students and for the lives of the colleges and the University as institutions of higher education.

Consortium: New Orleans Consortium

Title of Program: Cross-registration

Participating Institutions:

Loyola University
St. Mary's Dominican College
Xavier University of Louisiana

Administrator: Ms. Mary H. Ellis, Executive Director, New Orleans Consortium

A. Program

The New Orleans Consortium was founded because of an increasing desire for cooperation among the three Catholic colleges in New Orleans. Its purposes, as stated in its charter, include increasing the variety of course offerings to students and alleviating duplication of courses. Cross-registration was an original program of the consortium. Over the years, policy constraints on the program have been relaxed, and a full-time student may now take six semester hours or two courses on the other campuses in any term. The limit does not apply to students enrolled in the Consortium's Social Work Program or its Unique Majors Program, which are offered as interinstitutional programs. The operation of the program was improved in 1971 when a common calendar was introduced, removing many scheduling barriers. With the common calendar, a joint master schedule of classes was published for the first time, giving students full information on course schedules and enrollment procedures on the three campuses. Procedures were also revised to eliminate the requirement for official permission to cross-register. One form is used on all campuses for registration on another campus. Both in pre-registration and regular registration, however, the cross-registering student must register on the campus where the course will be offered.

The colleges have never exchanged funds for cross-registered courses, nor have students paid additional tuition and fees, except laboratory fees, for cross-registration. Courses are available on an open-space basis, and few exceptions to this regulation are made to accommodate cross-registering students.

Cross-registration has achieved more than expanding the registration options. One interesting effect reported to the visiting team has been a contribution toward improvement in race relations. Through cross-registration, students from Loyola University and Dominican College, which are predominately white, are able to meet students at Xavier University, which is the nation's only black college or university which is also Catholic. Xavier students take courses and meet students on the predominately white campus.

Cross-registration has also been a stimulus in the development of new academic programs. It was the enabling vehicle for the establishment of the Social Work Program, which is the first accredited consortium department of social work in the nation. Cross-registration was a major influence in the establishment of the Unique Majors Program. The "unique majors" concept allows students to take majors at a college other than their home college. An increasing number of departments are meeting for planning purposes. The results range from interdependent curricula to alternative scheduling of duplicated offerings, and to the establishment of language centers.

B. Costs

The program is viewed by the administrations as one which neither incurs costs nor generates funds. The only recorded costs are for printing the joint schedule, which is prorated among the campuses, and for printing the cross-registration forms, which is absorbed in the regular budget. The Registrars report that about 5% of staff time is given to cross-registration, but they see this activity as simply a part of the regular activity of their offices. They are student-oriented. The enthusiasm with which they approach consortium activities and needs mirrors the institutional commitment to cooperation.

The Presidents, Deans, and the executive committee do not view the program in dollar terms. They believe some economies have been realized over the years, but the prevailing attitude is that to measure costs would be a waste of time and money and, more importantly, would be contrary to the spirit of cooperation. One Vice-President referred to cross-registration as a cost-avoidance program: duplication has been reduced through joint academic planning. Most administrators interviewed share that view. They hold that cross-registration permits resources that have already been budgeted (or paid for) to be used more efficiently and more productively.

C. Benefits

The expansion of educational opportunities has a formal expression in the Unique Majors Program, which permits students to take a major sequence on another campus while working toward a degree at his or her home institution. The number of major degree programs available to Dominican College students doubled when this program was established. The college's students do not use the program frequently, but it is attractive to some highly motivated students who would not otherwise consider a college as small as Dominican. There are similar benefits for Loyola and Xavier. Table I gives the list of unique majors - that is, majors offered only by one college, and majors offered only by two colleges.

Another measure of the benefits is the data in registration records showing the frequency with which cross-registration is used. Table II and III are matrices of registration data, in summary form, for the Consortium in 1976-77 and 1977-78. The figures on each line give the credit hours of registration by a particular college's student body at all three institutions. For example, Dominican College's students cross-registered into 497 credit hours of courses at Loyola University in the two semesters of 1976-77, and into 56 credit hours of courses at Xavier University. The numbers in each column allocate the credit hours of enrollment at one institution according to the home institution of the enrolling students. For example, Loyola University's students cross-registered into 516 credit hours of Dominican College's courses in 1976-77, and Xavier University's students cross-registered into 193 credit hours of Dominican College's courses. The total figures for that column show that students from the other two institutions combined cross-registered into Dominican College's courses for 709 credit hours out of the 14,592 total credit hours at the college, or 4.7% of the registrations.

It is the last three lines of Tables II and III that show how extensively the program is used. Data from other consortia suggest that the percentages are typical of cross-registration rates at colleges which are not adjacent to one another and whose programs are largely in the liberal arts and are entirely undergraduate. While freshmen and sophomores are taking required course sequences, they only infrequently see an advantage in courses on other campuses. Cross-registration is largely used by juniors and seniors - who make up well under one-half of the student bodies of these three institutions. If data existed on cross-registration by level, they would probably show that about one course registration in every 20 to 30 registrations (3% to 4%) would be a student from one of the other two campuses.

The third measure of cross-registration that the visiting team used was to

Table I

Unique Majors Program of Non-Duplicated Sequences

Offered only by Loyola

- Classical Guitar**
- Classical Studies
- Classical Studies Education
- Computer Science
- Finance
- General Business
- German
- German Education
- Harp**
- International Business
- Jazz Studies**
- Journalism
- Liberal Studies
- Management
- Music Therapy**
- Piano Pedagogy**
- Public Administration
- Religious Studies
- Russian

Offered only by Dominican

- Corrections
- Cytotechnology
- Deaf Education
- Foods and Nutrition
- French
- French Education
- Merchandising
- Respiratory Care
- Secretary-Executive (4-year)
- Secretary-Legal (A.A.S.) (2-year)
- Secretary-Medical (A.A.S.) (2-year)
- Vocational Home Economics
- Vocational Home Economics Education

Offered only by Xavier

- Art (B.F.A.)
- Art Therapy
- Spanish
- Spanish Education

Offered only by Loyola and Xavier

- Communications/Mass Communication
- Drama/Theatre Arts
- Drama Education
- Theatre Arts Education
- Economics
- Philosophy
- Physical Education
- Physical Education Education
- Physics
- Politican Science
- Pre-Engineering
- Sociology
- Speech Education

Offered only by Dominican and Xavier

- Secretarial Administration
- Speech Pathology
- Speech Pathology Education

Offered only by Dominican and Loyola

- Criminal Justice

** Open to Xavier but not Dominican students.

Table II

Registration by Institution in 1976-77
New Orleans Consortium
(Credit Hours)

FROM ↓ TO →	Dominican	Loyola	Xavier	Total Cross-Registration
Dominican	14,243	397	56	553
Loyola	516	66,580	198	714
Xavier	193	560	57,087	753
TOTAL CROSS-REGISTRATION	709	1,057	254	2,020
TOTAL	14,952	67,630	57,341	
Cross-Registration as % of Registration	4.7%	1.6%	0.4%	1.4%

Note: Total credit hours of registration: 139,923

Table III

Registration by Institution in 1977-78
New Orleans Consortium
(Credit Hours)

FROM ↓ TO →	Dominican	Loyola	Xavier	Total Cross-Registration
Dominican	14,276	490	69	559
Loyola	428	67,187	188	616
Xavier	260	481	55,340	741
TOTAL CROSS-REGISTRATION	688	971	257	1,916
TOTAL	14,964	68,158	55,597	
Cross-Registration as % of Registration	4.6%	1.4%	0.5%	1.4%

Note: Total credit hours of registration: 138,719 estimate its value in dollars. As explained in the methodology section above, several costing techniques are appropriate to estimate the value. In this study, however, only two techniques have been used:

(1) To multiply the institution's total instructional cost by the percent of enrollment that is cross-registered. This is justified by the proposition that the educational benefits of an instructional program are equivalent to the costs of those programs. Hence, if 1.4% of course registrations originate through cross-registration, as they do at the New Orleans Consortium, then 1.4% of the instructional costs and instructional benefits may be allocated to the students cross-registering from the other member institutions.

(2) To multiply the credit hours of cross-registration into an institution by the tuition rates shown in its catalogue - even though cross-registering students make no payments to the host institution.

The results of the first technique are shown in Table IV.

Table IV

The Derived Value of Cross-Registration in 1976-77
Calculated from Cost of Instruction
New Orleans Consortium

	Percent of Cross-Registration "into"	Cost of Instruction	Derived Value of Cross-Registration
Dominican College	4.7%	$ 633,352	$ 29,768
Loyola University	1.6%	3,760,204	60,163
Xavier University	0.4%	3,035,074	12,140
Total		$7,428,630	$102,071

In aggregrate, the three institutions had instructional costs of $7,428,630 in 1976-77, of which $102,071 has been allocated to cross-registration. It is the latter figure ($102,071) which is equated with the benefits given by the institutions through cross-registration to students from the other campuses. Because instructional costs for the year 1977-78 are not available as this case study is being written, value estimates of cross-registration cannot be derived for that year.

The results of the second technique for estimating the derived value of cross-registration are shown in Table V.

In Table V, the perspective has been reversed from that of Table IV. Instead of benefits being equated with costs, they are equated with revenues - what the students would pay for their cross-registered courses if they were charged tuition by the institutions for enrolling in selected courses as part-time visiting students. Under this technique of costing, the benefits to cross-registering students are estimated to have been $132,622 in 1976-77.

The visiting team has no preference between the derived value as estimated in Table IV and as estimated in Table V. The figures are no more than estimates, but they are consistent and suggest a range to the monetary value of cross-registration's benefits.

Table V

The Derived Value of Cross-Registration in 1976-77
Calculated by Tuition Rates

	Credit Hours Provided	Tuition Per Credit Hour	Derived Value of Cross-Registration
Dominican College	709	$60	$ 42,540
Loyola University	1,057	$66	69,762
Xavier University	254	$80	20,320
Total			$132,622

Consortium: Pittsburgh Council on Higher Education

Title of Program: Cross-Registration

Participating Institutions:

- Carlow College
- Carnegie Mellon University
- Chatham College
- Community College of Allegheny County
- Duquesne University
- La Roche College
- Pittsburgh Theological Seminary
- Point Park College
- Robert Morris College
- University of Pittsburgh

Administrator: Mr. J. G. K. Miller, Executive Director, Pittsburgh Council on Higher Education

A. PROGRAM

The Pittsburgh Council on Higher Education (PCHE) was founded in 1966 to make more effective the communication among the colleges and universities in the city of Pittsburgh and to provide a mechanism for interinstitutional cooperation and policy coordination. When the Council was incorporated in 1971, the position of executive director was established - events which demonstrated the member institutions' commitment to enhancing educational opportunities for their students and to exploring cooperative activities which would conserve resources.

The purposes of the Council are:

- To represent by common voice the joint opinion of Pittsburgh's accredited colleges,universities, and major graduate and research institutions on such issues as the Council may wish to speak,
- To sponsor such studies as may lead to the identification of areas in which two or more institutions may cooperate,
- To undertake such joint programs as may expand educational opportunity for the student, extend faculty resources, and conserve institutional resources, and
- To enrich the intellectual and cultural life of the city and region by joint sponsorship of such programs as the Council may deem appropriate from time to time.

The PCHE Handbook states that "cross-campus communications at all levels has become an essential goal in and of itself."

All ten institutions of higher education in Allegheny County are the members of PCHE. The Council provides a means for them to undertake joint studies, make collective proposals, and support cooperative programs and activities. An elaborate network of committees enables officers on each of the campuses to exchange views, data,and experiences with their counterparts on the other campuses. The Council speaks with a common voice on key public issues and supports legislative proposals of joint interest to the member institutions.

The governing council of PCHE, consisting of two trustees from each institution, meets annually with the presidents to review activities, establish policy, and set priorities. The council of presidents meets bi-monthly. The Council's organization consists of committees that coordinate cooperative programs. A Planning Committee makes recommendations to the PCHE presidents and carries out special assignments. The administrative committees consist of Admissions, Business Officers, Development, Insurance, Library, Public Relations, Registrars, Security, Student Leaders, and Student Personnel Deans. The academic committees are Academic Deans, Black Studies, Continuing Education, Ethnic Studies, Music Education, Nursing Education, and Western European Studies. All committees have some activity every year, with some of them generating greater initiative on selected projects. Among the most active are the Registrars, a committee which meets monthly or even more often and which is largely concerned with problems of cross-registration.

To the officers of the institutions, one of the primary values of PCHE is the forum which it provides for exchange of views. The presidents are especially pleased with the success that they have had as a group in influencing community decisions on problems of concern to higher education. Through the council of presidents, the institutions have been able to assist one another in seeking joint resolution of numerous kinds of problems. Some are educational issues; some are community problems. Some are assistance with financial difficulities, which at one time included the possible closing of one of the smaller institutions. The Council also sponsors specific activities such as an international choral festival, a collegiate dance festival, and other cultural events. It provides a mechanism for developing studies of common concern. Through PCHE, curricular experimentation and cross-campus support programs have been established in black studies, women's studies, and ethnic studies. The Council's primary program, however, is cross-registration.

The seeds of cross-registration were planted in 1962 in a registration agreement between Chatham College and the Carnegie Institute of Technology (now Carnegie-Mellon University). By 1969, guidelines had been established for cross-registration among the five institutions which then were the PCHE members. Cross-registration was limited to upper division undergraduate courses, and home students were given preference when space was limited. Moreover, not all departments of the member institutions were willing to align themselves with the program. The Committee on Cross-College and University Registration nevertheless reported, "The opportunities which cross-registration will make available to the students of all the colleges are rich and numerous." The guidelines were revised in 1970 and again in 1972 as institutional membership in the Council grew.

The 1972 guidelines are still in effect today. Full-time students at any PCHE institution may take courses at any other PCHE institution. First priority in registration is given to students of the host college, and not all departments or schools in all institutions participate in the program. The approval by the home college or university must be obtained before a student may cross-register, and a student normally may enroll in no more than one course off campus in any one term. No additional tuition is charged to students who cross-register but they are responsible for paying course fees and laboratory fees to the host institution.

The presidents and other institutional officers feel strongly that PCHE is a resource for the optimum use of educational opportunities in the Pittsburgh area as well as a visible symbol of cooperation. A basic premise of the program is that it be operated without publicity or promotional efforts. The member institutions prefer that their students know of the program and the means for using it, and that the student be the person who decides whether or not to use it.

The program has grown from 284 students cross-registering in 1969-70 to about 1,000 cross-registering annually in recent years. Because cross-registration from a small college into a large university diversifies academic opportunities far more than does the reverse flow, it is used more frequently by students at the small colleges. Yet it is interesting that the three large universities retain enthusiasm for the program.

For example, the flow into the University of Pittsburgh, which is larger than the flow from it,is viewed by the University's officers as no problem. The opportunities for their students to register elsewhere is valued because there are always some students who find that opportunity to be important. Officers including registrars insist that there are no significant operating costs for the program except for cross-registration forms. Staff time at the registrars' offices given to cross-registration activities is reported to be insignificant even though the registrars themselves estimate that they spend about 7% of their time on PCHE affairs. The presidents, moreover, have stated that any exchange of funds would defeat the purpose of the program and would be cumbersome. Whatever imbalances or losses there might be to a particular institution are considered to be more than offset by the unmeasurable value from cross-fertilization of ideas flowing from the program, and also from its public relations benefits.

The program has problems which discourage many students from using it. One of the most troublesome is transportation. The public transit system is time consuming, and students with cars have major parking problems. Shuttle buses were tried in 1969, but the experiment failed. Difficulties with transportation create scheduling problems and other scheduling problems exist as well. The absence of a common calendar for the member institutions is a major reason that cross-registration appears to have reached a plateau. Among the PCHE institutions are calendars based on semesters, trimesters, the 4-1-4 plan, the 4-4-2 plan, and the 4-4 plan. The diversity in calendars causes problems in transferring academic credits to the home institution of conflicting examination schedules, and of, arranging early and late housing accomodations. If it were not for the frequent communication among the registrars, their cooperative spirit, and a strong collegial feeling among them, the problems of registering, making drop/add adjustments,reporting grades and arranging for graduation might well not be resolved. Like the presidents, the registrars believe that because cross-registration is valuable to certain students, it is worth the time and effort which it requires. They consider their hours given to PCHE to be a part of their institution's membership in PCHE and part of their job.

B. SURVEY OF FACULTY AND STUDENTS ON PCHE CROSS-REGISTRATION

The CIL representatives were fortunate indeed to receive a recently-completed dissertation written by Carol Ann Rush in fulfillment of Ph.D. requirements at the University of Pittsburgh. Dr. Rush developed a questionnaire to survey students who cross-registered in the Fall or Winter of 1976-77, and another questionnaire to survey the faculty who offered the courses to those students. Her summary of the results is reproduced below, with deletion of some passages not central to the CIL study and with very minor editing.

Summary of Faculty Data:

> Of the faculty respondents who advise students, about 79% from the Fall term and 73% from the Winter term indicated that they recommend

cross-registration to their advisees. Almost 90% of the respondents of each term from Institutions 1-9 combined recommend cross-registration to their advisees. However, at Institution 10 (University of Pittsburgh) only about 73% of the Fall term and 61% of the Winter term respondents recommend cross-registration to their advisees.

Only 11% of the Fall term and 16% of the Winter term respondents indicated that cross-registered students present special problems to them. Only 3.4% of the Fall term and 1.7% of the Winter term respondents indicated that they do not want to teach more cross-registered students. The remainder of the respondents were divided almost equally between definitely wanting to teach more cross-registered students and being neutral. Of those who gave positive responses, many indicated that cross-registered students give the class new dimensions or gain a novel perspective from the class. Other positive responses were that cross-registered students are highly motivated and that the program allows for more efficient utilization of resources.

Only 3.1% of the Fall term and 1.9% of the Winter term respondents had negative feelings toward cross-registration. Many of those who had positive feelings toward cross-registration indicated their feelings with a general positive statement. Others stated that cross-registration: gives students varied academic or social experience; gives students a broader base of course offerings; and allows for more efficient utilization of resources. Some respondents with positive feelings toward cross-registration suggested that the program needs more promotion or more coordination.

Summary of the Student Data:

During the Fall 1976 term responses were received from 58.2% of the students who were surveyed regarding the PCHE cross-registration program. During the Winter 1977 term the response rate was 70.3%. About 35% of the responses from each term came from seniors. Very few freshmen took courses by cross-registration during these two terms. The respondents came from all selected major fields of study and there appeared to be no clustering in any one area.

More than 50% of the respondents from each term cross-registered to Institution 10 (University of Pittsburgh). About 44% of the Fall term and 36% of the Winter term respondents selected a particular institution because the course which they wanted to take was available there, whereas it was not available at their home institution. Other reasons for selecting a particular institution were: the student was enrolled in a cooperative program; the host institution was conveniently located; the student had heard of a good course or department at the host institution; the student had heard of a particularly good professor at the host institution; the student wanted to attend the host institution full-time during the next year; or the student wanted an academic viewpoint or an environment which would be different than that at the home institution.

The respondents cross-registered to all of the selected major fields of study. There appeared to be no clustering in any one area.

Table I
Cross-Registration Figures 1969-1977
Students Out To Other Institutions
Pittsburgh Council on Higher Education
(Course Registrations)

	Academic Year							
From Institution	69-70	70-71	71-72	72-73	73-74	74-75	75-76	76-77
Carlow	67	100	114	107	122	147	127	100
Car.-Mel.	74	109	101	257	320	323	261	232
Chatham	77	90	105	170	128	107	116	91
Com. Col.	0	0	0	0	11	72	40	73
Duq.*	15	49	44	75	115	158	214	206
La Ro.	0	0	0	0	0	15	17	33
Pitt. Theo.	0	0	0	9	9	13	9	11
Pt. Park	0	15	30	51	47	49	37	33
Robt. Mor.	0	0	0	0	3	2	6	10
U. Pitt.	51	62	110	157	137	253	192	162
Total	284	425	504	826	892	1139	1019	951

Table II

Registration by Institution in 1976-77
Pittsburgh Council on Higher Education
(Course Registrations)

TO → FROM ↓	Car-Low	Car.-Mel.	Chat-ham	Com. Col.	Duq.	La Roc.	Pit. Theo.	Pt. Park	Robt. Mor.	Univ. Pitt.	Total Cross-Regis.
Carlow	7295	0	4	3	35	0	0	1	0	57	100
Car.-Mel.	0	47563	29	3	4	0	0	0	0	196	232
Chatham	3	19	4674	1	8	0	0	2	3	55	91
Com. Col.	3	2	0	17164	11	0	1	13	3	41	73
Duq.*	41	6	0	12	48926	3	2	5	14	123	206
La Ro.	0	2	0	1	3	452	0	2	0	25	33
Pitt. Theo.	0	0	0	0	0	1	1804	0	0	10	11
Pt. Park	0	4	1	7	5	1	0	4829	1	14	33
Robt. Mor.	0	0	0	0	5	0	0	0	14333	5	10
U. Pitt.*	28	80	1	11	29	0	3	7	3	263428	162
TOTAL CROSS-REGIS.	75	113	35	38	101	4	5	30	24	526	951
TOTAL INSTI-TUTION	7370	47676	4709	17202	49027	456	1809	4559	14357	263954	
% CROSS-REGIS.	1.0%	0.2%	0.7%	0.2%	0.2%	0.9%	0.3%	0.6%	0.2%	0.2%	0.2%

Total Registrations: 411,419

*Numbers of course registrations were derived by dividing credit hours generated by 3 hours per course.

Table III
Registration by Institution in 1977-78
Pittsburgh Council on Higher Education
(Course Registration)

To → From ↓	Carlow	Carmel	Chatham	Com. Coll.	Duq.	LaRo.	Pitt. Theo.	Pt. Part	Robt. Mor.	Univ. Pitt.	Total Cross Regis.
Carlow	6817	3	1	4	43	0	0	0	0	27	78
Car. - Mel.	0	48768	27	4	11	0	0	4	2	185	233
Chat.	5	19	4849	1	8	1	0	3	2	70	109
Com. Coll.	1	2	0	17494	2	2	0	3	1	25	36
Duq.#	46	13	1	8	47558	0	1	6	23	150	248
LaRc.	1	3	0	4	3	509	0	0	2	1	14
Pitt Theo.*	0	0	0	0	3	0	1805	0	0	5	8
Pt. Park	1	5	0	9	2	1	0	5209	0	2	20
Robt. Mor.	0	0	0	0	6	1	0	0	14737	6	13
U Pitt*	39	77	0	17	51	4	1	1	1	212654	191
TOTAL CR	93	122	29	47	129	9	2	18	30	471	950
TOTAL INSTITUTION	6910	48890	4878	17541	47687	518	1807	5227	14707	213125	
% CR	1.3	0.2	0.7	0.2	0.3	1.7	0.1	0.3	0.2	0.2	0.3

Total Registrations: 361290

*Numbers of course registrations were derived by dividing credit hours generated by 3 hours per course.

About 55% of the respondent's from each term indicated that they were motivated to cross-register because a course which they wanted or needed was not available at their home institution, or it was not available at a suitable time. There were 15% of the Fall term and 20% of the Winter term respondents who were enrolled in cooperative programs which required cross-registration. Other reasons given for cross-registering were: the student wanted a change in environment, a new academic viewpoint; the student had heard of a good course or department; or the student wanted to take a course which was being taught by a particular professor.

Only about 40% of the respondents from each term had ever cross-registered prior to that term. About 44% of the Fall term and 52% of the Winter term respondents cross-registered for courses in their major field of study. Almost one-third of the respondents from each term cross-registered for electives.

Almost 56% of the Fall term and 63% of the Winter term respondents encountered problems with: the cross-registration procedures and rules; calendar and time schedule conflicts; transportation and parking problems; or difficulty in adjusting to the host campus. Nearly 45% of those who gave suggestions for improvement of the program, suggested that the rules and procedures of cross-registration should be revised. Other suggestions for improvement included: publicize it more; make course descriptions and time schedules available for all students; standardize all aspects of the program; provide better transportation; and make various services at the host institution available to the cross-registered student.

About 19% of the respondents from each term indicated they would be able to graduate sooner because they cross-registered. About 90% of the respondents from each term would recommend cross-registration to their friends.

About 86% of the respondents from each term had positive feelings toward cross-registration. Over 30% of these students indicated their feelings with general positive statements. The others indicated that they felt positive about cross-registration because it provided them with a change of environment, a new academic viewpoint, or a broader base of course offerings.

Negative feelings toward cross-registration were expressed by 13% of the Fall term and 15% of the Winter term respondents. It was found that 50% of the Fall term and 52% of the Winter term respondents who expressed these negative feelings were enrolled in a cooperative program.

C. BENEFITS

The primary benefits of cross-registration, as reported by presidents and other institutional officers, are:

- The institutions, especially the smaller ones, face severe budgetary constraints. Knowing that they are not capable of serving all the needs of all students, they can draw on the academic offerings of other PCHE institutions, pursue their own areas of specialization, and reduce duplication of effort in certain areas.

- Attrition in the smaller colleges would be higher if it were not for the students' ready access to other institutions with their rich variety of course offerings.
- All students at the institutions have access to library holdings of over 5,000,000 volumes.
- The PCHE "faculty" numbered 5,359 in 1977; the PCHE "student body", 66,463.
- Cross-registration is a good recruiting tool for both students and faculty.

Within the ten institutions is a vast array of academic programs, some of which are unique to one or two institutions. Key to Education in Pennsylvania lists 317 undergraduate programs offered by the colleges and universities in PCHE. Many of these are duplicated by as many as seven or eight institutions (e.g.English, History, Biology). Of the 317 undergraduate programs (listed by HEGIS classification), 86 are offered by only one institution; 25, by only two institutions; and 7, by only three institutions.

The following undergraduate programs are offered only by one or two or three institutions in PCHE (source: Key to Education in Pennsylvania):

Architecture
Interior Design
Biochemistry
Environmental studies
Life Sciences
Bio-Physics/Microbiology
Banking and Finance
Hospitality Administration
Marketing and Purchasing
Business
Transportation and Public Utilities
Secretarial Studies
Business Economics
Athletic Administration
Communications
Journalism
Graphic Design/Graphic Art
Information Sciences & Systems
Special Education
Education of the Mentally Retarded
Music Education
Art Education
Health, Physical Education and Recreation
Business; Commerce and Distribution
Social Studies Education
Industrial Arts, Vocational Education

Home Economics
Vocational Education/Health
Bioengineering/Biomedicine
Basic Engineering and Technologies
Chemical Engineering
Engineering Technology
Civil, Construction and Transportation
Electrical Engineering/Electronics
Mechanical Engineering
Industrial and Management Engineering
Metallurgical Engineering
Mining and Mineral Engineering
Art History/Appreciation
Music (performing)
Music (liberal arts program)
Applied Design
Dance
Cinematography
Photography
Italian
Russian
Chinese
Japanese
Bilingual Administration
Pharmacy
Physical Therapy
Radiological Health
Music Therapy Preparation
Anesthesiology
Child Care/Development
Health Records Administration
Long Term Care Administration
Art Therapy Preparation
Pre Medical
Comparative Literature
Classics
Linguistics
Speech
English Writing
Religious Studies
Earth Sciences
Geology
Metallurgy
Earth and Planetary Sciences
Pedology
Public Administration
Social Work and Helping Services
Administration of Justice
Administration of Criminal Justice
Geography
Sociology/Anthropology
International Relations
Pre-Law

Afro-American Studies
Urban Studies
Theological professions
Natural Sciences
Physical Science
Behavorial Sciences
Contemporary USA
Radiological Technology
Nursing, RN
Accounting Technology
Communication Technology
Computer Science Technology
Public Administration and Management Technology
Banking and Finance Technology
Secretarial Technology
Hotel and Restaurant Management
Data Processing Technology
Medical and Biological Laboratory Technology
Practical Nursing
Inhalation Therapy Technology
Psychiatric Technology
Dietetic Technology
Emergency Medical Technology
Architectural Drafting Technology
Automotive Technology
Welding Technology
Civil Technology
Electronics and Machine Technology
Electromechanical Technology
Industrial Technology
Mechanical Technology
Construction and Building Technology
Drafting Technology
Research Engineering Technology
Structural Design Technology
Natural Science Technology
Police, Law Enforcement, Corrections
Recreation and Social Work
Fire Control Technology

The Council of Registrars submitted data on registration by institution, which provided the data base for Tables II and III. Seven of the registrars preferred reporting course registrations rather than credit hours of registrations. Course registrations were derived for Duquesne University, Pittsburgh Theological Seminary, and the University of Pittsburgh by converting credit hours to courses using a factor of three. The resulting figures probably understate course registration slightly.

The CIL teams found in all of their site visits that cross-registration rates are lowest among graduate students except at the Boston Theological Institute, which was founded for cross-registration among graduate schools. Few graduate students at Atlanta University and at the University of

Massachusetts (Amherst) enroll in the undergraduate courses of the colleges which are affiliated with those universities. Nor are graduate students ordinarily interested in the graduate courses offered by universities other than their own. The effect of graduate enrollment on the overall pattern of cross-registration at PCHE is strong. There is a similar effect at the undergraduate level in large universities and large community colleges.

Because Duquesne University, the University of Pittsburgh, and the Community College of Allegheny County are all large institutions, and because the three universities in PCHE have large graduate enrollments, the cross-registration rate for the ten institutions combined was only 0.2% in 1977-78 and 0.3% in 1978-79.

Another measure of cross-registration is the number of students who use the program. This can be estimated because policy rarely permits a student to register in more than one course each term.

Hence the number of cross-registrations - courses, not credit hours, per term - is close to the number of students who cross-register. Table IV gives estimates on the number of undergraduate students at each institution who used the program in one term of 1976-77.

Table IV

Average Number of Students Who Cross-Registered
Each Term of 1976-77 Exclusive of the Summer Term
Pittsburgh Consortium for Higher Education

	FTE Undergraduates Fall 1976	Cross-Regis. Per Term "from"	% of Undergraduates Who Cross-Registered
Carlow College	724	39	5.4
Carnegie-Mellon	3,540	116	3.3
Chatham College	491	55	11.2
Comm. Coll. of Alleg. Co.	15,901	18	0.1
Duquesne University	7,475	124	1.7
La Roche College	732	7	1.0
Pitt. Theol. Seminary	-0-	-0-	-0-
Point Park College	1,805	10	0.6
Robert Morris College	3,943	6	0.2
University of Pittsburgh	18,937	96	0.5
Total	53,548	471*	0.9

* Cross-registration from the Pittsburgh Tehological Seminary is excluded because no Seminary students are undergraduates.

In 1976-77 there were 951 cross-registrations (see Table II), or an average of 471 cross-registrations each semester. Assuming that each student enrolled in only one course and that none of the cross-registrations were by graduate students, then just under 1% of the "PCHE student body" used the program in a single term. Dr. Rush's study of cross-registration in 1976-77 shows that almost 60% of the cross-registering students had not previously cross-registered. From her figures, it may be inferred that of the undergraduates enrolled at a PCHE institution four academic years, about 4% to 5% have cross-registered at least once.

D. AN ESTIMATED VALUE FOR CROSS-REGISTRATION

The methodology for estimating a dollar value for cross-registration has been reviewed earlier in the chapter. The results of the calculations for PCHE are shown in Table V.

Table V

	% Cross-Registration "into"	Cost of Instruction	Derived Value of Cross-Reg.
Carlow College	1.0	$ 848,794	$ 8,488
Carnegie-Mellon University	0.2	15,874,286	31,749
Chatham College	0.7	1,267,450	8,872
Community College of Allegheny County	0.2	N/A	N/A
Duquesne University	0.2	8,372,503	16,745
La Roche College	0.9	569,772	5,127
Pittsburgh Theological Seminary	0.3	589,265	1,768
Point Park College	0.6	1,865,215	11,191
Robert Moris College	0.2	2,283,485	4,567
University of Pittsburgh	0.2	61,248,715	122,497
Total			$211,004

*Total is exclusive of a cross-registration value at the Community College of Allegheny County.

The estimated benefits of $211,004 would be slightly higher if cost figures had been available from the Community College.

E. COSTS OF CROSS-REGISTRATION

As reviewed briefly above, the philosophy and operation of the program do not produce the kind of data necessary for the CIL study. To develop such an estimate would be costly and, in the words of one administrator, "would defeat the purpose of the program." Furthermore, both the presidents and the registrars believe that whatever the costs might be, they are very small. "If I am registering a student from another campus," commented one registrar, "then there is one of our students who is taking a course somewhere else. There is not much difference between the work that comes with somebody else's student and the work that went somewhere else that I did not have to handle." Even if there is some difference, the figures in Tables I, II, and III are good evidence that the total additional effort on all of the campuses combined is limited.

F. EVALUATION OF COST-EFFECTIVENESS

CIL representatives found at PCHE an interesting contrast between the praise and support for the cross-registration program at the member institutions (which is confirmed by Dr. Rush's study) and the apparently low rate of its use which appears in the various tables. There are several explanations for the anomaly:

- The program is designed to expand a student's opportunities but not to permit wholesale cross-registration of the kinds found at the Atlanta University Center, the Boston Theological Institute, and Five Colleges.
- The concentrations of enrollment at the Community College and in graduate programs at PCHE's three major universities and its Theological Seminary reduce sharply cross-registration rates for all enrollment at those institutions and the aggregate rate for PCHE as a whole.
- If data were available to show cross-registration of juniors and seniors, which is where cross-registration tends to have the highest use in most consortia, it would surely show rates of use several times greater than the tables in this case study show.
- Cross-registration is sampled by a larger portion of undergraduate students who complete a four-year sequence than is at first apparent in the data. It may be inferred from the data given CIL representatives and from Dr. Rush's findings that about 4% to 5% of this group cross-registered at least once during their undergraduate education; and that of the program's users, about 40% cross-register more than once.
- Presidents and other institutional officers hold that the program is valuable for students who wish to use it. It is a "low key" operation which should be and is used by students with motivation to receive some of their education away from their own college or university. It is not intended for use by most students. Dr. Rush's findings support that view: about one-half of the cross-registering students whose attitudes were not favorable (they

are a small part of all cross-registering students) were among the few whose cross-registration was required in a program offered jointly by two institutions.

All of the information received by CIL representatives supports two general conclusions about the program's effectiveness. First, it serves the purpose and objectives established for it. Second, it is a cost-effective program. Its costs, although not estimated, are low. Whatever the costs might be, they are well below the value of the program which is estimated to have been more than $200,000 in 1976-77.

In concluding, it should be stressed that the true value of the program cannot be shown in dollar estimates, but that statement, of course, is applicable to all education.

Consortium: Tri-College University

Title of Program: Course Exchange

Participating Institutions:

Concordia College
Moorhead State University
North Dakota State University

Administrator: Mr. John McCune, Provost, Tri-College University

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A. Program

Tri-College University (TCU) is a voluntary consortium of three institutions located in two states: Concordia College (CC) and Moorhead State University (MSU) are in Moorhead, Minnesota. North Dakota State University (NDSU) is in Fargo. TCU is a non-profit corporation chartered in North Dakota and licensed to do business in Minnesota. Concordia is a private college of the American Lutheran Church, Moorhead State University was first a normal school, then a teacher's college, and later a state college; it is now a state university. North Dakota State University is a land grant college established as North Dakota Agricultural College in 1889 under the Morrill Act.

Tri-College University was created in 1970 and has recently become the first consortium in the nation to be accredited for the granting of degrees. It is accredited by the North Central Association of Colleges and Schools at the master's and specialist degree levels. Approximately 200 students are enrolled in the two degree programs offered by TCU: the master of science in educational administration and the specialist in educational administration. TCU also administers other programs: student course exchange, library cooperation, an intercampus bus service, the interdisciplinary TCU Humanities Forum, the Center for Environmental Studies, the Economic Education Center, and the Prairie Writing Project.

The course exchange program began in 1966, before TCU was created. It then offered students the option of taking one course per term on another campus in the arrangement, with no increase in tuition, provided the course was not offered by the student's home institution. Today the policy remains the same for students going to and from Concordia College; however, students at Moorhead State University and North Dakota State University may cross-register for any course and any number of courses each term. Registration for courses on other campuses is administered by the home campus's Registrar. The Registrars' exchange registration information via telephone, a system that is efficient for both the students and the Registrars.

With the creation of Tri-College University, the procedures for course exchange, and the commitment to cooperation were strengthened. The cooperation has led to the establishment of formal academic cooperation between Minnesota and North Dakota. In 1975, a tuition reciprocity agreement between the two states came into effect, modeled in part after the TCU program. Students from both states were eligible to cross the Red River and enroll in the other state's university at in-state tuition rates. TCU cross-registration dropped in 1975-76 because many students chose to enroll full-time in the other state's university under the reciprocity program. "The important thing to note is that although it appears that the number of students going back and forth between the two state schools declined in 1975-76, this was not the case at all. Only the number using TCU Cross-Registration declined; the total was up."

B. Benefits of Course Exchange

Administrators at the TCU institutions referred frequently to the importance of Course Exchange in encouraging each institution to concentrate its resources in selected academic disciplines and academic programs, avoiding the problems of course proliferation and program proliferation. Table I shows the students' opportunities for study in programs offered on other campuses that are not offered on the home campus. The Table is an index of the educational expansion offered by Course Exchange and also by the interstate compact between Minnesota and North Dakota.

Table I

Academic Program Areas

Tri-College University

Program Area	Concord College	Moorhead State University	North Dakota State University
Accounting	X	X	
Agricultural Business			X
Agricultural Economics			X
Agricultural Education			X
Agricultural Mechanization			X
Agricultural Production			X
Agricultural Science			X
Agronomy			X
Animal Health Technician			X
Animal Science			X
Application of Agricultural Chemicals			X
Agricultural Engineering			X
Architecture			X
Aerospace Studies			X
Art	X	X	X
History	X		
Teaching	X	X	
Professional	X		
Ceramics		X	
Graphics/Applied Design		X	
Printmaking		X	
Sculpture		X	
Anthropology		X	
American Studies		X	
Athletics			X
Athletic Training			X
Biology	X	X	X
Bio-engineering			X
Bacteriology			X
Behavioral Biology			X
Biochemistry			X

Program Area	Institution Concordia	 MSU	 NDSU
Botany			X
Business Administration	X	X	X
Business Education	X	X	
Chemistry	X	X	X
Classical Languages	X		
Communications	X		X
Computer Science	X	X	X
Criminal Justice		X	X
Cereal Chemistry & Technology			X
Civil Engineering			X
Communications Engineering			X
Computer Engineering			X
Construction Mgt & Engineering			X
Child Development and Family Relations	X		X
Coaching			X
Chemical Physics			X
Chemistry with Engr Electives			X
Distributive Education		X	
Design			X
Dietetics			X
Drama			X
Driver Education			X
Economics	X	X	X
Environmental Studies	X		X
Education	X	X	X
English	X	X	X
Earth Science		X	X
Entomology			X
Electrical and Electronics Engineering			X
Engineering Physics			X
Environmental Science			X
French	X	X	X
Finance		X	
Farm and Ranch Operation/Mgt			X
Fashion Design			X
Fashion Merchandizing/Retailing			X
Food and Nutrition	X		X
Food Science			X
German	X	X	X
Geography		X	X
Grain Merchandising			X
Geochemistry			X
Greek	X		
Geology			X
History	X	X	X
Hospital Administration	X		
Hospital Financial Mgt	X		
Humanities	X		X

Program Area	Institution Concordia	MSU	NDSU
Health Education		X	X
Hotel Management		X	
Horticulture and Forestry			X
Home Mgt and Family Economics			X
Home Economics	X		X
Health Services Management			X
Human Services			X
International Relations	X		
Industrial Education		X	
Industrial Illustration		X	
Industrail Engr and Mgt			X
Institutional Environmental Services			X
Interior Design			X
Interdepartmental Nutrition Science			X
Latin	X		
Library Science	X		
Mathematics	X	X	X
Medical Technology	X	X	X
Music	X	X	X
Management		X	
Marketing		X	
Mass Communications		X	
Manufacturing Engineering			X
Mechanical Engr and Applied Mechanics			X
Military Science			X
Management Information Science			X
Nursing		X	
Philosophy	X	X	X
Physical Education	X	X	X
Physics	X	X	X
Political Science	X	X	X
Psychology	X	X	X
Plant Pathology			X
Power System Engineering			X
Physical Ed for Handicapped			X
Public Service			X
Pharmacy			X
Polymers and Coatings			X
Religion	X		X
Russian	X		
Recreation			X
Range Management			X
Social Work	X	X	
Sociology	X	X	X
Spanish	X	X	X
Speech, Communication, Theatre Arts	X	X	X
Speech Pathology/Audiology		X	X

Program Area	Institution		
	Concordia	MSU	NDSU
Special Education		X	
Social Science	X	X	X
Soils			X
Textiles and Clothing			X
Textile Science			X
Vocational Rehabilitation Therapy		X	
Vocational Technical Ed		X	
Veterinary Science			X
Wildlife and Fisheries Biology			X
Zoology			X

Course Exchange, while growing in absolute numbers as enrollment has increased, has remained steady as a percent of total enrollment, accounting for between 2.1% and 2.3% of the totals for the three years ending June 1978. Summer registration has been excluded from the calculations, which are shown in Table II. The Registrars supplied data on the academic fields and programs in which cross-registration occurred. Undergraduate students have used course exchanges in a wide range of fields. Its use by graduate students is considerably smaller, which is due to graduate enrollment being smaller and to the more intensive concentration of courses taken by graduate students. At TCU, as in many (probably most all) consortia, elective courses are used more frequently in cross-registration than are required courses. At TCU, this characteristic is reinforced by the interstate compact that permits students to change universities without an out-of-state tuition charge, and the major reason for students changing between Moorhead State and North Dakota State is to change majors. The same effect occurs for entering students. Before the interstate compact was approved, some students who were enrolled at one university would take their major sequence at the other university. Since the compact, students desiring a major in the university of the other state will frequently enroll as full-time students there, thus reducing the use of Course Exchange for major sequences and other required courses. Data for analysis of that interesting compact unfortunately could not be organized.

The use of Course Exchange by institution, both cross-registrations "from" and cross-registrations "to," are shown in Table IV.

Table II

Credit Hours of Course Exchange
Compared with Total Credit Hours of Enrollment
The Three TCU Institutions
1975-76, 1976-77, 1977-78 and Fall 1978

	MSU	NDSU	CC	Total
Quarter Credit Hours of Course Exchange (Students from the other two Institutions)				
1975-76	6,162	5,512	413	12,087
1976-77	6,425	5,824	271	12,520
1977-78	8,317	5,649	362	14,328
Fall 1978	2,468	2,051	200	4,719
Total Credit Hours of Enrollment				
1975-76	212,346	285,174	80,080	577,600
1976-77	218,529	294,852	80,966	594,347
1977-78	234,897	308,296	83,048	626,241
Fall 1978	86,212	107,170	42,620	236,002
Course Exchange as % of Total Credit Hours of Enrollment				
1975-76	2.9%	1.9%	0.5%	2.1%
1976-77	2.9%	2.0%	0.3%	2.1%
1977-78	3.5%	1.8%	0.4%	2.3%
Fall 1978	2.9%	1.9%	0.5%	2.0%

Table III
Registration by Institution in 1976-77
Tri-College University
(Credit Hours)

To → From ↓	MSU	NDSU	CC	Cross Regis.
MSU	212,104			
NDSU		289,028		
CC			80,695	
Total Cross Regis.	6,425	5,824	271	12,520
Total	218,529	294,852	80,966	
% Cross Regis."into"	2.9	2.0	0.3	

Total Registered Hours: 594,347

Table IV
Registration by Institution in 1977-78
Tri-College University
(Credit Hours)

To → From ↓	MSU	NDSU	CC	Cross Regis.
MSU	226,580	5,406	216	5,622
NDSU	7,907	302,647	146	8,053
CC	419	243	82,686	653
Total Cross Regis	8,317	5,649	362	14,328
Total	234,897	308,296	83,048	
% Cross Regis "into"	3.5	1.8	0.4	2.2

Total Registered Hours: 626,241

The methodology section of this chapter gives reasons for the selection of two of several possible methods of assigning a dollar value to the benefits of cross-registration. One of them, deriving the value from instructional costs, equates the benefits received by cross-registering students with the direct costs of instruction allocated to those students. The results of this calculation for the TCU are shown in Table V.

Table V
Derived Value of Cross-Registration in 1977-78
Calculated from Instructional Costs

	% of Cross Regis. "into"	Instititional Costs	Value of Cross Regis.
MSU	$6,781,000	3.5%	$271,000
NDSU	9,240,000	1.8%	166,000
CC	3,525,000	0.4%	14,000
Total	$19,546,000	2.3%	$451,000

The other method derives the value of cross-registration by multiplying the credit hours of cross-registration into each institution and the applicable tuition rate charged by each. This reverses the perspective in Table V, looking at the value from the revenue point of view (even though no tuition charges are assessed for Course Exchange) rather than as a costing calculation.

Table VI
Derived Value of Cross-Registration in 1977-78
Calculated from Tuition Rates

	Credit Hrs. of Cross-Registration "into"	Tuition per Credit Hour	Value of Cross-Registration
MSU	6,425	$ 9,25	$ 59,431
NDSU	5,824	43.50	253,344
CC	271	(see note)	33,875
Total	12,520		$346,650

Note: Concordia College charges $500 per course, and the 271 credit hours are equivalent to 67.75 courses.

C. Student and Faculty Attitudes toward Course Exchange

In 1978, Dr. Joel Charon of Moorhead State University and Dr. Keith Wulff of Concordia College, both sociologists, conducted a study on attitudes toward Tri-College University. A random sample of students and faculty members was surveyed on their knowledge of Course Exchange and other cooperative programs, and their use of and attitudes toward the programs. (The general community of the Fargo-Moorhead area was also surveyed. The results showed favorable attitudes toward cooperation, but they are not relevant to this study of Course Exchange.)

Before enrolling at a TCU institution, 77% of the responding students knew about Course Exchange. Knowledge of the several cooperative programs influenced 32% of the students in their choice of a college; 18% had taken courses on the other campuses; 71% indicated that Course Exchange was very important or important to themselves; and 97% felt that Course Exchange was very important or important to other students. Faculty were asked about their attitude toward the program: 91% felt that it was a "good opportunity for students", 65% had "very favorable" attitudes toward it, and only one of two responding faculty replied "unfavorable."

The survey is a strong affirmation of the CIL team's findings in conversations with Presidents, Vice Presidents, Registrars,and other administrators.

D. Costs of Course Exchange

At TCU, as at most consortia with programs of cross-registration, students may enroll on the other campuses if they do not displace home-campus students from their first-choice courses. Few exceptions to the "empty seat" rule can be recalled by the administrators of the institutions. Yet, they are satisfied that only on rare occasions have students been barred from cross-registering in courses of their choice. Student interests mesh well with the pattern of empty seats.

The TCU institutions have thus traded instructional services at no added cost to the institutions, apart from the small costs of administering the program and of providing transportation. In this barter of instructional services, there appear to be no costs whatever in the classroom, either to the institutions or to the students. At least this was true until recently; the Moorhead administration charged NDSU $20,000 for an imbalance in the 1977-78 Exchange program that was due primarily to MSU's offerings in business programs, elementary education, and the humanities. Although this amount is a cost to NDSU, for TCU as a whole it is not a cost since the amount is a revenue item for MSU.

For 1977-78, the dollar outlays for Course Exchange are estimated to be:

Bus Service	$ 7,800
Tri-College calendar	1,600
Registration costs (Registrar office salaries)	12,200
Other campus costs	3,000
Allocation of consortium budget to cross-registration (10% of the TCU Provost's offive budget)	8,800
Total	$33,400

This cost represented less than 2/10ths of 1% of the total costs of instruction, which (for the three institutions combined) were $19,546,000 in 1977-78.

E. Evaluation of Cost Effectiveness

There are no data to indicate the variety of ways in which institutional costs have been avoided because of Course Exchange, but there is unanimous agreement among institutional spokesmen that this has occurred. They cite better use of dollars, faculty, and classrooms, and the avoidance of costs for specialized courses and programs which are already available at another TCU member campus. Unfortunately, there has not been any attempt to catalog or quantify these savings.

It may be that total expenditures on instruction are now less than they would otherwise be because of the program, but probably they are not. The main effects are on the allocation of funds. Resources are being allocated somewhat differently in each institution than they would be without Course Exchange. Over the years of the program, each institution has come to realize that its students will not need certain courses or programs on its

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own campus which have not been in its catalog, but in which student interest has grown. Course Exchange offers each institution a flexibility to concentrate its limited resources in a limited number of programs while avoiding attempts to diversify faculty efforts as student interests shift.

Cost avoidance through Course Exchange is, in this sense, not the avoidance of additional expenditures that would require additional revenues. It is, rather, the avoidance of course and program proliferation, the avoidance of academic deficits.

The benefits of Course Exchange cannot be divorced from the larger benefits of the TCU consortial activities. One administrator likened TCU to a club membership. He emphasized that the tangible benefits were real and measurable, such as cross-registration, but that they told only part of the story. He insisted that the most significant benefits were not quantifiable, such as the improvement in interinstitutional communication, the stimulation of congeniality, and the ethos which encourages and supports cooperation in a number of unidentified programs.

Other benefits include the enrichment for students in studying with new students under new faculty on other campuses, an increased ability of the colleges to recruit students and to retain students who might otherwise transfer to study programs not offered at their original college, and the avoidance of duplication of programs and competition for new programs.

In summary, the Course Exchange program is measurably cost effective:

- The administrators have all indicated that the availability of the program influences their planning and resource allocation decisions. Available dollars are used more effectively as competition and duplication have been reduced.
- Students have benefitted from the increase in courses available to them. Without interinstitutional cooperation, this opportunity would not exist.
- The program is offered at far less than the identified institutional cost. The institutions, in 1977-78, offered $451,000 in educational services at a cost of $33,400 for administration and transportation, but at no additional cost to the students of the three institutions.

Two Other Reviews of Cross-Registration

In concluding this chapter on cross-registration, two other reviews are presented. The first is a descriptive report on cross-registration in the New Hampshire College and University Council but which was not treated as a case study for cost analysis. The information was acquired during a team visit to NHCUC when other joint programs were analyzed (and are presented in other chapters in this report). The NHCUC cross-registration operates very efficiently with minimal effort in the Council's central office and was thought worthy of inclusion here.

The second review of cross-registration is a "Course Enrichment" assessment technique developed by Fritz Grupe in 1977. The March 1978 Update that follows outlines his methodology and uses his consortium, the Associated Colleges of the St. Lawrence Valley, to illustrate application of the methodology.

New Hampshire Cross-Registration

The Inter-College Student Enrollment Program operated by the New Hampshire College and University Council (NHCUC) began in the Fall of 1971. The table below reflects the expansion of the program from being predominantly part-time to including approximately equal numbers of full-time students.

NHCUC Student Exchange
1971-72 through 1977-78

	71-72	72-73	73-74	74-75	75-76	76-77	77-78
Full-Time Students	2	40	45	100	111	142	107
Part-Time Students	130	185	77	122	127	115	107
Total	132	225	122	222	238	257	214

The regulations for the exchange program are kept simple. The major guideline is that enrollment at other Council institutions, whether full-time or part-time, is on a space available basis.

For part-time students, inter-college enrollment cannot exceed two courses. This regulation works no particular hardship on students because, with the exception of the Manchester area, the institutions are too scattered to allow routine commuting. Tuition charges are not essential either to the student or the sending institution other than laboratory fees for special instruction. The latter charges are the responsibility of the student.

Full-time students may enroll for a maximum of two semesters at a member institution. In this case, however, dollars do change hands. For the period of the exchange, the students remain registered at their home (sending) institutions. They continue to pay to their home institutions all charges for tuition and fees, and the home institutions pay the receiving institution. The amounts paid to the receiving institutions, however, do not exceed the tuition normally paid at the home institution, nor do they exceed that of the receiving institution, even if the home institution's fees are higher. Charges for room and board, student activities fees, and health fees are paid by each student directly to the receiving institution.

The financial guidelines for the inter-college enrollment program guarantees that no institution will lose money since no institution is obligated to pay another institution more than it collects in tuition. The worst that can happen is that a college will "break even," paying out exactly what it has collected; the best is that a student will attend an institution with a lower tuition, thereby allowing the sending institution to retain the tuition differential. In addition, colleges are safeguarded from add-on expenses because students are accepted only on a space available basis. This means that exchange students do not require additional expenditures on the part of the receiving college. Thus, while in some instances a receiving college may receive less than its full tuition charge, the exchange student is occupying a seat that otherwise would have been empty.

The total cost of the Inter-College Student Enrollment Program, as administered by NHCUC, is approximately $1,200. This covers a pro-rata portion of one staff member's time, publications, and materials. There is no cost to the institutions for the program.

There are two major benefits to the exchange program. First, and most important from the viewpoint of the institutions, is the student recruitment value of the program. High school seniors and guidance counselors believe that this is an attractive feature and an added incentive for attending one of the NHCUC institutions. Second, the program is seen as aiding student retention. A student can choose to attend a small college where he or she can receive considerable personal attention from faculty and staff and still have the opportunity to attend another or several other institutions in the state for a single course or for an entire semester. The exchange program offers students the opportunity to sample the curricula at other institutions without having to go through the process of transfer.

UPDATE

MARCH 1978

CIL COST SAVINGS/EFFECTIVENESS PROJECT

TOPIC: Course Enrichment Value: One Approach To Cost Effectiveness Research

In a period of reductions in sources of grant support, high inflation rates, decreasing percentages of state and national allocations, and projected declines in enrollments, educators cannot evaluate cross-registration programs strictly in terms of their educational objectives. They must also ask, "What is the effort worth in financial terms?" "Does the process increase or decrease costs?" "Can the process be made more productive?"

The assumption implicit in these questions is that if costs and benefits do not reflect a net institutional gain, the expected potential value of a consortium has not been proven. The assessment of costs and benefits for cooperative programs has been of relatively recent concern to consortia. This is probably because the methods of assessment, except in the most obvious instances, have not been available. The following steps offer one technique for examining the financial attributes of cross-registration: assessing course enrichment.

Administrators and faculty will point out that through cross-registration their students will have a larger field of course titles to select from and that the students will take advantage of them. Therefore, a procedure that embodies an attempt to determine the extent to which an institution, in fact, realizes an enrichment in the course offerings serves a more useful and valid purpose than one which tries to detect non-existing net changes in either revenues or expenditures.

ASSESSING COURSE ENRICHMENT

I. Count the Number of Different Course Titles for Which Each College's Students Cross-Register. The first step in identifying what will be termed the "course enrichment value" (CEV) of cross-registration is the enumeration of the different course titles for which students cross-register. This criterion serves a more readily comparable measure of financial impact than does either credit or contact hours.

During the 1975-76 academic year, the following numbers of course titles were assessed for the institutions of the Associated Colleges of the St. Lawrence Valley.

	Fall	Spring	Total
Clarkson College	45	60	105
St. Lawrence University	13	31	44
SUNY A. T. C.	13	21	34
SUNY Potsdam	57	83	140
TOTAL	128	195	323

II. Divide the Total Number of Courses by the Average Course Load of a Full-Time Instructional Staff Member. While the actual course load per faculty member varies somewhat from campus to campus, it was felt that an eight-course load per year was typical. By dividing the number of course titles (323) by the typical course load (8), it was found that the participating colleges would have had to retain more than 38 additional faculty to have provided their students the same options on campus as were made possible through the consortium. For each campus the number of added staff equivalents would have been:

	Staff Position Equivalents
Clarkson College	13.13
St. Lawrence University	5.80
SUNY A.T.C.	4.25
SUNY Potsdam	15.00
TOTAL	38.18

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III. Multiply the Additional Instructional Staff Positions by the Average Compensation Attributed to the Positions. It was felt that an average compensation of $20,500 (typical associate professor compensation based on AAUPS schedules) was sufficiently close to the actual instructional compensation expenses of the teachers of cross-registrants to serve the purposes of the assessment process.

By multiplying the number of staff positions "gained" by a college by not having to staff the courses drawn upon through cross-registration, by an average compensation level, it was estimated that the four colleges collectively had realized a CEV estimated to be $786,175 for the 1975-76 academic year.

Clarkson College	13.3	x	$20,500	=	$272,650
St. Lawrence University	5.80	x	20,500	=	118,900
SUNY A.T.C.	4.25	x	20,500	=	87,125
SUNY Potsdam	15.0	x	20,500	=	307,500
TOTAL					$786,175

IV. Subtract Any Real Costs Which Are Attributable to the Cross-Registration Program. The incremental costing procedures that make sense at the institutional level do not adequately serve the cross-registration assessment because cross-registration does not substantially increase institutional costs. Neither the operation of registrars' and deans' offices nor the costs of communications and overhead are noticeably changed.

There are, however, some costs which may be properly taken as the costs of the cross-registration program: (1) the proportionate cost of operating the consortium office for the purposes of cross-registration; (2) direct campus expenditures for accommodating cross-registrants from other campuses; and (3) transportation expenses. Items 1 and 3 did not exist in the Associated Colleges. These costs should be subtracted from the gross CEV.

Consequently, the net CEV realized for each campus in this instance was:

Clarkson College	$272,650	-	$5,000	=	$267,650
St. Lawrence University	118,900	-	5,000	=	113,900
SUNY A.T.C.	87,125	-	5,000	=	82,125
SUNY Potsdam	307,500	-	5,000	=	302,500
					$766,175

Being able to attribute a monetary value to the generalized feeling that cross-registration provides an economic advantage is itself a step forward. The advantages are quite substantial if the premises of the process described are accepted. Refinements in the process could be made. For instance, using the compensation levels of adjunct faculty a lower CEV might be obtained. However, technique modification would probably not serve to substantially alter the conclusion that cross-registration is, in this instance, a cost-effective program.

It appears that employment of the concept of the CEV is a valuable means of describing, in financial terms, the value of cross-registration. The procedure has applicability in many settings. The procedure also indicates that cooperative programs can be, and in most cases, ought to be looked at in such a way as to permit decision-makers to see the constructive, financial benefits consortia can make to the efficient and cost effective functioning of their institutions.

Procedures and data reported here have been taken from a paper by Fritz Grupe, Executive Director of the Associated Colleges of the St. Lawrence Valley, which has been accepted for publication by the Society for College and University Planning.

CHAPTER III

LIBRARY AND MEDIA COOPERATION

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LIBRARY AND MEDIA COOPERATION

Introduction

Background of Library Cooperation

Interlibrary cooperation is an old concept but it was in the mid-1960s when the practice began to take on significance for a number of institutions. A 1972 study of 125 academic library consortia*, commissioned by the Office of Education, found that 90% of the cooperative arrangements were established since 1960 and over 75% since 1965.[1]

Chronological Founding and
Academic Library Consortia

Year Founded	Number Founded
1931-40	2
1941-50	3
1951-60	5
1961-65	16
1966-71	99
1931-71	125

Federal legislation gave impetus to cooperation among libraries of all types. The Library Services and Construction Act of 1964 was amended in 1966 to authorize interlibrary cooperation "for the establishment and maintenance of local, regional, state or interstate cooperative networks of libraries, including state, school, college and university, public and special libraries and information centers to provide maximum effective use of funds in providing services to all." Federal appropriations in 1968 and subsequent years spawned both state and interstate network systems.

In 1975, the Office of Education reported that each of the 50 states and some outlying territories had established telecommunications networks within the state and with the capability of communicating with networks of other states.[2] The most recent national inventory of library cooperation is The ASLA Report on Interlibrary Cooperation 1978.[3] The 446-page document noted that there are 92,801 libraries of all types in the United States and identified over 750 single-type, multi-type, and interstate cooperatives and networks. There clearly is a continuing movement toward increased library cooperation on all fronts: to an increasing number of cooperatives, to an expansion of the membership participation in cooperatives, and to evolving more substantive forms of cooperation. Though more than two-thirds of the cooperatives reported by ASLA are single-type, it has been observed that many single-type cooperatives are later reincarnated as multi-type cooperations.[4]

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*Libraries generally are classified by four types: academic, meaning a college or university library; school; public; and special. The referenced study defined an academic library consortium to mean more than one-half the members were academic libraries.

Additionally, the financial pressure on individual libraries and the advancements in communications technology are precipitating national systems and networks. One example is OCLC, which originally was the Ohio College Library Center when founded in 1967. It now has over 1,700 participating college libraries in 46 states, employs over 400 staff, and operates with an annual budget exceeding $21 million. In the past year, OCLC catalogued 10.6 million books and publications and printed 82.4 million catalog cards.[5] OCLC has planned for a minimum growth rate of 15% per year and has altered its governance to reflect its national constituency.[6]

Other developments are occurring so rapidly at the national level, such as a proposed national periodicals bank, that it is necessary to reference a number of resources to keep current. Some of the more pertinent library organizations are the American Library Association, the Council on Library Resources, the Association of Research Libraries, and EDUCOM.

Diversity of Library Cooperation

On the voluntary side, library sharing occurs through single purpose and special purpose arrangements which are dedicated solely to library cooperation, and through multi-purpose consortia which include library cooperation as one of several programs. There are, of course, statutorily-based library systems as well. Although the focus of the CIL/Carnegie study was on voluntary relationships, the state supported systems in many instances are inseparably intertwined with the voluntary systems.

A national study in 1975 identified 38 program areas in which academic library consortia participate.[7]

Centralized Acquisitions and Processing
Assigned Subject Specialization Acquisitions
Other Activities - Acquisitions
Bibliographic Center Operation
Bibliographic Verification
Bindery Services
Reciprocal Borrowing Privileges
Catalog Card Production
Cataloging--Other Support
Shared On-Line Cataloging
Central Resource or Storage Center
Charging System
Clearinghouse
Special Communications Services
Consulting Services

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Delivery Systems
Expanded Interlibrary Loan Service
Management, Planning, Policy Development
Media Loan
Media Production
Media Rental
Meetings
Microfilming
Periodical Indexing
Photocopying Services
Public Interest Programs
Joint Purchasing
Recruitment Programs
Reference Services
Joint Research Projects
Special Collections
Shared Staff
Training or Upgrading of Staff
Union Catalogs and Lists--Production/Maintenance
Workshops

Guidelines for Library Cooperation

Patrick in her Guidelines for Library Cooperation identified four phases of development for academic library consortia:

EXPLORATORY PHASE

Step 1. Find out if there are any existing consortia that could provide the desired benefits. If there are, contact them and explore the possibility and desirability of joining.
Step 2. Identify potential members for a consortium and attempt to generate interest among them.
Step 3. Hold a meeting or series of meetings to discuss with potential members the desirability and feasibility of establishing a consortium.
Step 4. Consider the implications of being a component of a higher education consortium.

PLANNING PHASE

Step 1. Identify the objectives of the consortium.
Step 2. Decide upon the organizational structure of the consortium and draft by-laws.
Step 3. Develop tentative program plans.
Step 4. Determine the amount of financial support needed.
Step 5. Devise a plan for obtaining funding and other support.
Step 6. Make any legal or other agreements necessary to establish a consortium.
Step 7. Appoint a library Consortium Director.
Step 8. Locate facilities for centralized headquarters, if desired.

DEVELOPMENT PHASE

Step 1. Develop a detailed design of each activity to be undertaken.
Step 2. Assign personnel and committees to specific developmental tasks.
Step 3. Establish implementation schedules.
Step 4. Develop policies to guide the ongoing functions.
Step 5. Make frequent progress reports to the Consortium Director, advisory committees, member institutions, etc., on developmental tasks being undertaken.
Step 6. Define a methodology for operational system/project evaluation.
Step 7. If necessary, modify goals and objectives based on current knowledge and results of the planning effort.

OPERATION AND EVALUATION PHASE

Step 1. Implement each activity in a trial operational mode.
Step 2. Evaluate the effectiveness of each activity.
Step 3. Make design modifications indicated by the evaluation.
Step 4. Implement the fully operational mode.
Step 5. Evaluate the consortium and its activities.

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Economic Incentive to Cooperate

There are numerous positive reasons for library cooperation (e.g., the personal and professional development of staff), but the bottom line is simply that of economic necessity. For example, Stanford University and the University of California at Berkeley, which have two of the nation's ten largest libraries, entered into an unprecedented bilateral arrangement in November 1976 because "No single university can afford to continue financing the level of acquisitions per year when the annual price rise is so far ahead of the average economic growth and general cost of living indexes."[8]

The Associated Colleges of the Midwest, whose membership is comprised of 13 well-known four-year private institutions, has found it advantageous to maintain a central periodical collection for more than 10 years. The point is that even the more affluent institutions publicly acknowledge their need to cooperate when financial advantage can be gained.

Problems in Library Cooperation

A committee of the Five Associated University Libraries in New York reported in 1970, after a two-year study, that the greatest lesson learned by the group was "...to realize the fantastic complexity involved in the most simple interinstitutional act. Each project interlocks in some way with every other project and the effects are not always clear."[9]

In evaluating the history of library cooperation, Kraus has written: "Several difficulties present themselves at the outset. The literature of library cooperation is very large and most of the articles are uncritical. Although most of the cooperative enterprises of libraries are announced and described in some detail in library periodicals, there are few evaluative reports that give a clear account of the success of a venture and the factors leading to success or failure. Unsuccessful ones, in fact, simply seem to fade away. Costs of a cooperative effort are particularly hard to ascertain, in part because many expenses are absorbed in the participating libraries, and in part because standard reporting procedures have generally not yet been developed."[10]

McDonald has noted other problems. "There is, for example, a persistent attitude that assigns cooperative activities low priority and low or no budget. This viewpoint insists that cooperation be undertaken as a part-time extra duty and then only after more important work has been accomplished. There are other attitudes that have proved difficult to overcome. It is asserted that cooperation causes delay and inconvenience resulting in a general deterioration in service. Other complaints are that cooperation is expensive, that it involves high effort for low return, that there are inequities in contributions and benefits, and that cooperation is often ill-defined and redundant."[11]

In looking at "A Century of Cooperative Programs Among Academic Libraries," Weber observed: "The challenges, the opportunities, and the problems do not seem to change fundamentally with the passing of time." He concluded his article by quoting Mayhew: "It seems clear that the major problems to be overcome with respect to educational or research use of networks are not technical... The real problems are political, organizational, and economic."[12]

Assessing the Cost Effectiveness of Library Cooperation

Because of the enormity, variety, and complexity of interlibrary cooperation, it was recognized early in this component of the CIL/Carnegie project that only a limited sampling of the many forms of cooperation could be included for analysis as case studies. The primary factors in determining which cases were included were the availability of data and the willingness of personnel to provide outsiders with the data for review.

A review of the literature on library cooperation revealed a void of financial data on costs and benefits. An excellent study was published on the Ohio State University Library before and after its conversion to the OCLC system,[13] but the case studies of library cooperatives did not go beyond providing general descriptive information. One of the better sources of descriptive case study information is Multitype Library Cooperation. The book presents thirteen case study perspectives of multi-type library cooperatives.

Since there are no established procedures to assess the costs and benefits of library cooperation, the background work of Thomas James for the CIL/Carnegie project proved helpful. Following his suggestions, it was determined that a range of assessment techniques would be used to review library arrangements.

One way to assess the value of library cooperation is to consider the value of the additional library resources made available through a cooperative arrangement. For example, if College A valued its library resources at $1 million and fully cooperated with Colleges B and C, whose respective library resources were valued at $1.25 million and $.75 million, College A would have increased its access to library resources worth an additional $2 million. The cumulative added value for the three institutions would be $6 million.

College	Value of Library Resources	Added Value Thru Cooperation	Total Value
A	$1.00 million	$2.00 million	$3.00 million
B	$1.25 million	$1.75 million	$3.00 million
C	$ .75 million	$2.25 million	$3.00 million
Total	$3.00 million	$6.00 million	

In this theoretical assessment model, the value of the duplicative holdings and the additional costs for providing access should be subtracted from the total added value.

A second approach to assessing the value of library cooperation is to quantify as benefits the extent that the opportunities of added access are actually utilized. Staying with a theoretical model, assume that the annual library budgets for College A, B, and C were $100,000, $125,000, and $75,000 respectively. If it were determined by a library utilization study that 10% of the total usage of each library was due to intercollege cooperation, the value of the cooperative library benefits provided by the three colleges would be $10,000, $12,500, and $7,500 respectively. The cumulative cooperative benefits would have a value of $30,000.

Further, it is reasonable to assume, in the hypothetical case, that each college would not decrease the library services to its own clientele by 10% because of cooperation or that it would reduce its budget by 10% in the absence of cooperation. Thus, the dollar value of library services provided to the constituents of each college would be equal to the sum of each college's expenditures and the cooperative benefits, less its expenditures for cooperation.

The most simple and practical approach to assessing the costs and benefits of library cooperation when possible, is simply to compare the costs and benefits without cooperation and the costs and benefits with cooperation. Because cost analysis is not an exact science and because in most cases data have to be manufactured for a presumed second set of circumstance, analyses often are limited to theoretical comparisons. When there is agreement among the cooperative participants about the value of the benefits, the dollar amounts represent what James describes as "negotiated savings."

Consortium: Tri-College University (TCU)

Title of Program: TCU Library Cooperation

Participating Institutions:

North Dakota State University
Concordia College
Moorhead State University

Administrator: Mr. John McCune, Provost, Tri-College University

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A. BACKGROUND

1. History

Library cooperation among the three institutions located in Moorhead, Minnesota, and Fargo, North Dakota, began in the mid-1960s and predates the founding of Tri-College University (TCU) as a general purpose consortium. Progress toward closer cooperation over the past decade is evidenced by:

- The inclusion in the cooperative arrangement of two public libraries and two hospital libraries in the Twin Cities area;
- The development of library teletype links with the North Dakota Network for Knowledge (NDNK) and by joint participation in the Minnesota Inter-library Telecommunications Exchange (MINITEX).
- TCU membership in OCLC which provides book cataloguing and other benefits for the individual institutions at minimal costs.

2. Objectives

The librarians are striving to provide a broader range and greater depth of resources for the students and faculties of the three institutions in response to the dual economic realities of increasing materials cost and tightening budgets. A joint film library, a union list of serials, a union list of books, access to major data banks, twice-daily shuttle service, and increased cooperative purchasing and processing are goals being realized.

3. General Description of TCU Library Cooperation

Tri-College University students and staff may use any of the three academic libraries by showing appropriate identification. If preferred, materials (films, periodicals, books) may be delivered between libraries by a free shuttle service, usually within 24 hours, and returned likewise.

TCU students and staff also are entitled to register at the Fargo and Moorhead public libraries and may use local hospital libraries. Additionally, TCU accesses NDNK, MINITEX, and OCLC for materials not available locally.

The library directors operate administratively on a triumvirate base with the Directors at each institution holding responsibility for the portfolio of one or more active task forces. The Directors meet every two weeks and the task forces at least monthly or as necessary. Task Forces currently active are: Cataloging Task Force, Acquisitions Task Force, Reference Task Force, Shuttle Service Task Force, and Media Task Force.

The reference and circulation librarians hold workshops on reference tools periodically. In the Fall of 1977-78, the first Guide to Tri-College University Libraries was produced and broadly distributed.

More than 17,500 inter-campus requests are received by the three libraries annually.

General data for 1977-78 related to the libraries follows:

	CC	NDSU	MSU	Total
FTE Enrollments	2,605	7,577	5,301	15,483
Library Budgets				
Books	$ 89,100	$ 193,587	$ 97,767	$ 380,454
Periodicals/ Newspapers	42,000	173,853	41,580	257,433
Other	285,522	546,637	396,256	1,228,415
Total	$ 416,622	$ 914,077	$ 535,603	$ 1,866,302
Number of books	165,000	325,000	210,000	700,000
Book Value	$2,409,000	$4,745,000	$3,212,000	$10,366,000

* Calculations are based on the standard Library Journal average of $14.60 per volume in 1977-78.

Note: CC - Concordia College; NDSU - North Dakota State University;
MSU - Moorhead State University

B. PROGRAMS

1. TCU Film Library: A Venture in Cooperation

A venture grant of $3,000 in the Spring of 1974 provided the impetus for a film library program that has now grown to a collection of 541 titles valued at over $140,000 with more than 3,800 bookings annually.

Early in 1974, faced with declining budgets and the inflationary trend in film rental costs, a Tri-College committee was formed to study the possibility of extending cooperative efforts to making educational films more widely available to the academic community. After examining the film rental records and film purchasing practices of each institution, the committee sought a grant based on their conviction that a cooperative film library could meet the following objectives:

- Provide as many or more films with the same or less investment as a film rental program;
- Provide easier access with more flexibility in scheduling;
- Provide for more frequent use of titles in a variety of situations;
- Provide motivation for increased use of film as a teaching tool.

On receipt of the grant (somewhat less than requested), each institution contributed $1,200 of rental funds to initiate the library. The catalogs of two producers were circulated to the faculties to select preview prints. Some 500 titles were previewed by the faculties from which 169 were selected. These were acquired by lease and rent-to-own contracts. A shuttle service delivering materials twice daily to each library was already in place. Space and student clerical assistance were contributed by Moorhead State. A film catalog was produced from producers' annotations with a simple subject index and distributed to all faculty members.

In the Spring of 1975, a faculty survey was conducted which confirmed the initial success of the library reflected by 1,218 bookings in less than nine months of operation. A second venture grant was obtained to purchase a film inspection machine and the budget was tripled by equal contributions from library funds.

The library, now in its fifth year of activity, operates under a voluntary agreement approved by the Consortium which reflects the same objectives, policies, and procedures initially established. The film library is administered by a Director appointed from the Library/AV staff on whose campus the collection is housed. A film library committee made up of the Director and one representative from each campus is responsible for establishing and recommending policies concerning budgeting, selection, acquisition, and maintenance of the collection. The Director reports to the Provost of the Consortium.

The selection of films is based on the philosophy that the "users are the choosers". No films are purchsed without preview. All films selected should complement the curricula of the Tri-College University institutions. All films selected should be previewed and recommended by faculty at two or more institutions and there should be assurance that the film will be used at least four times annually, preferably at more than one institution. Normally, film titles in the North Dakota State Film Rental Catalog are not duplicated in the film library. The film request form asks the previewer to rate the film as excellent, good, or fair, and indicate whether the film is of high, medium, or low priority. Final selections from those recommended are made by the film committee each spring to allow time for acquisition and inclusion in the catalog published each fall.

The level of support for the film library is determined annually by the film library committee in consultation with the TCU library Directors and Provost. Careful selection is considered more important than dramatic budget increases. Currently, the budget supports five rent-to-own contracts, provides approximately $5,000 annually for direct purchase, supports a film booking clerk six hours per day for the academic term, and provides adequate funds for the publication of the annual film catalog and needed film maintenance supplies. The catalog is now produced from computer copy which is easily updated and provides an alphabetic list of

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titles with annotations, and a subject index. Approximately 1,500 copies are printed and distributed to the faculties annually, 250 to Concordia, 400 to Moorhead State, and 700 to North Dakota State.

The collection is maintained at Moorhead State University. The majority of the booking is done by telephone. Films are distributed to the North Dakota State Library and Concordia College AV Center via the twice daily shuttle service, or the films may be picked up at the Moorhead State AV Center. The cost of the shuttle service has not been included in the cost analysis as it was already in operation for purposes of distributing library materials and inter-campus correspondence.

Table I presents the financial history of the program, and Table II presents a comparison of the cost via the film library and the cost that would have resulted in providing the same services through film rental. For purposes of comparison, a one-time rental cost of all 541 titles in the existing catalog was calculated. Including personnel costs and return postage, it would amount to $7,513.25 or an average of $13.88/per booking, somewhat higher than the actual average rental experience of Moorhead State University over the four-year period.

Table III presents one year's cost and use by each institution. No studies have been done to explain the difference in use. One would certainly guess that proximity would be a major factor.

TABLE III

Tri-College University Film Library

Institutional Cost

1977-78

Institution	Total Cost	No. of Bookings	Avg. Cost/ Booking	Rental Cost	Cost Avoidance
Concordia College	$ 8,151.29	867	$9.40	$13,308.45	$ 5,157.16
Moorhead State	15,779.30	2121	7.44	32,557.35	16,778.05
North Dakota State	7,801.29	820	9.51	12,587.00	4,785.71
Total	$31,731.88	3808	$8.33	$58,452.80	$26,720.92

Table IV gives an idea of the existing balance of the collection and its use. It is interesting to note the relationship between titles available and the amount of use. The statistics have not been analyzed but certainly provide an avenue for further study. Given the funds and freedom to select a collection independently as media specialists, one wonders what the comparative results might have been.

While funding, facilities, personnel, and organization are imperative to the success of any project, the Tri-College University Film Library had several additional important advantages. A climate of cooperation already existed. The institutions are in close geographical proximity. The shuttle service was already in place. A fine working relationship with the North Dakota State Film Rental Library existed. Without these supporting conditions, it is doubtful that the film library could have enjoyed the same measure of success.

The TCU film library committee is looking forward to the continued growth of the collection, increasing assistance to the faculty in the selection process, and initiating in-service workshops or seminars on film as an instructional tool.

2. Tri-College Union Catalog of Books

To locate books not available at a home campus, the Tri-College Union Catalog of Books (computer based MARC) lists over 135,000 books held at the three institutions, which is well above 80% of the books added to the TCU libraries since 1968. The three libraries hold over 700,000 titles collectively. The actual overlap of the three collections is small: 75 percent of the titles are held by only one TCU library, 20 per cent by two, and five per cent by three. The catalogs are updated quarterly. All new material is added to film and retrospective conversion is well under way. Each quarterly update brings closer the goal of a complete TCU union catalog and the phasing out of the three card catalogs. The Union Catalog is stored on microfilm and is displayed on a television screen-like device called a Rom Reader. Two machines are provided at each library. Books at another library may be ordered by completing a shuttle request form.

Provision for a quick exchange of books can be very important to institutions with limited library resources. During 1977-78, more that 1,400 books and 230 government documents were delivered in response to loan requests. These statistics do not include walk-in traffic where students who are cross-registered check out books without using the shuttle service. Had the delivered books been purchased and processed by each college, using a conservative figure of $20 each, provision of the same resources independently would have cost an additional $32,600 minimum for the three institutions. Actually, to have acquired the same level of usage, the institutions likely would have had to double the number of acquisitions since, based on a study of the University of Pittsburgh library, one half of the books are never checked out one time.

To coordinate acquisitions, TCU has a Task Force that meets monthly. It reviews on a title-by-title basis, selections from the periodical Choice, a tool used by libraries in choosing acquisitions. By working together, task force members are able to eliminate unnecessary duplicate purchases. Also the task force coordinates the purchase of other expensive and/or unique titles for the TCU libraries.

The Acquisitions Task Force made a quantum leap forward in 1978 in producing a joint acquisitions policy. The resulting document should expand the capability of the Task Force and assist the faculty to make their selections.

In 1977-78, the TCU Librarians, without the benefit of a joint acquisitions policy, achieved a cooperative savings of $18,849.87 in avoiding some duplication purchases of books. A copy of the form used by the institutional librarians to calculate their costs and savings by reducing duplicate purchases is seen in Table V. A summary of the savings, costs, and differences for the twelve-month period follows:

Month 1977-78	Number of Books Not Purchased	List Price of Books Not Purchased	Avoided Processing Costs @ $10 per Book	Total Cost Avoidance
June	68	$ 1,093	$ 680	$ 1,773
July-Aug.	90	1,426	900	2,326
Sept.	59	843	590	1,433
Oct.	39	662	390	1,052
Nov.	52	1,068	520	1,588
Dec.	31	625	310	935
Jan.	72	1,277	720	1,997
Feb.	54	848	540	1,388
Mar.	86	1,813	860	2,673
Apr.	95	1,755	950	2,705
May	66	1,028	660	1,688
Total	712	$12,438	$7,120	$19,558

Related Costs

	Per Month	Per Year (11 months)
Professional Time		
3 librarians x 2 hrs. x $10/hr.	$60.00	$660
Clerical Time		
1 student x 2 hrs. x $2.20/hr.	4.40	48
Total	$64.40	$708
Difference		$18,849

Using the same procedures, the reported book savings for 1976-77 was $12,453.

Another cooperative savings results from joint TCU cataloguing participation in OCLC. During 1977-78, 15,321 corporate first time use charges were incurred @ $1.20 = $18,385.20 based on card sets purchased. However, total acquisitions were 22.5% more. Had the institutions cataloged independently incurring costs for all duplicates @$1.20, they would have spent $22,521.62. The difference represents a cost avoidance of $4,136.42. Costs are borne by each institution based on the percentage of the total number of card sets acquired quarterly. This, in another year of experience,is expected to result in a ratio of 45% for NDSU, 30% for MSU and 25% for CC, depending on the status of the book budget in any fiscal year. Stating it another way, instead of spending $1.20 per First Time Use, each library spent closer to $.93.

3. TCU Union List of Serials

A Tri-College Union List of Serials is provided to locate periodicals and newspapers available in the library system. As of April 1978, the Tri-College Union List of Serials (TCULS) contained 10,877 different serial titles and successive entries. Of these, the NDSU Library contributed 5,506 unique titles, MSU 1,067, and Concordia 709. Only 3,595 titles, or 33% of all the TCULS titles, were owned by more than one library. Lake Agassiz Regional Library, Fargo Public Library, the Veterans Administration Library, and St. Luke's Hospital Library and Nursing School Library also contribute titles and holdings to the TCULS.

The Union List is updated quarterly. Participating libraries are billed directly by the computer center for paper costs, as well as by NDSU for time spent in updating. This direct billing service allows each library to obtain the number of Union Lists that best fits its needs.

New programs that have been developed over the past year include the following:

- A list of serials by subject;
- Ref./Index/Abstract titles at NDSU sorted by subject as well as key word.

There are now approximately 46 different programs that can be run from the data included in the TCULS. It is hoped that even more programs will continue to be developed to more effectively aid the patrons of all participating libraries.

During 1977, TCU delivered 26,016 photo copies and 250 periodicals. The high usage of the service, made available at no charge to students and staff, attests to the value of the resource. There is no way to quantify the inter-campus use of periodicals as a result of the substantial cross-registration. Because of library cooperation a student at any one institution had access to 7,282 unique serial titles and to the services of three libraries, whose 1977-78 periodicals budgets totaled $257,433. If the total budgets are divided by the total number of different serials, 10,877, the annual costs per serial average are $23.77. If the 26,016 photo copies are divided by four pages per article, the shuttle service delivery in 1977-78 was 6,504 periodical articles and 250 periodicals, which gives a total of 6,754 periodical uses. Had they been purchased independently at a purchase, process, and maintenance cost of $23.77, the added value realized would have been $160,543. Adjustments downward would need to be made to take into account the number of uses that would have been duplicative.

4. TCU Library Shuttle Service

The shuttle service provides twice-daily (once daily in summer) pickups and delivery service at the libraries. Additionally, the service also stops at the Fargo and Moorhead public libraries, St. Luke's Hospital Library, and the USDA Metabolism Laboratory (while the VA Library still shares resources with the other libraries, it now provides its own transportation). Daily pickup and delivery of MINITEX materials at the Greyhound station is provided for all libraries. Films for the TCU Film Library and interinstitutional mail are also delivered through the shuttle service.

The shuttle service budget in 1977-78 was:

Driver's salary	$2,990
Mileage to driver	972
Social Security	175
Other	83
Total	$4,220

Four hospitals and public libraries paid $1,220 in user fees, leaving a balance of $3,000 for TCU. During the year the service delivered over 1,400 books, 230 government documents, 250 periodicals, 6,504 periodical articles (26,016 photo copies divided by four pages each), 1,687 films to NDSU and CC, and returned 1,687 films. Not counting any mail and packages, the total number of items is close to 12,000. Thus, the cost to TCU per item is less than 25¢. The convenience of the service, the quick delivery, and the avoidance of packaging and insurance suggests the limited cost is a bargain for the institutions.

C. SUMMARY

The TCU Library Budget for 1977-78 was:

Expenditures:	
Shuttle Service	$ 3,000
Films	18,100
Film Personnel/Supplies	3,500
Printing	500
Miscellaneous	400
Total	$25,500

Income:	
Concordia College	$ 8,500
Moorhead State	8,500
North Dakota State	8,500
Total	$28,500

Except for the support provided by the Bush Foundation for further developing the Union Catalog, all TCU library activities are now locally funded and the obligations are equally shared.

2. The indirect costs at the institutions, not counting the film library, for 1977-78 were:

Library Services	CC	MSU	NDSU	TOTAL
Salaries (clerical, tech.,)	$10,467.58	$13,034.62	$13,151.74	$36,653.94
TWX	600.00	600.00	600.00	1,800.00
Photoduplication	458.33	458.33	458.34	1,375.00
Total	$11,525.91	$14,092.95	$14,210.08	$39,828.94

D. CONCLUSION

Considering all direct and indirect costs, TCU library cooperation not only improves clientele services but leads to a cost savings.

TABLE I

Tri-College University

Film Library Cost Analysis

1974-75 thru 1978-79

Year	Cash	Overhead*	Grants	Film Stock**	Total
1974-75	$ 3,850.00	$ 2,000.00	$ 3,000.00		$ 8,850.00
1975-76	18,935.51	3,000.00	4,500.00		26,435.51
1976-77	21,968.30	3,500.00		$ 4,300.00	29,768.30
1977-78	22,806.88	4,175.00		4,750.00	31,731.88
Total	$67,560.69	$12,675.00	$ 7,500.00	$ 9,050.00	$96,785.69
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1978-79 (Projected)	$25,211.00	$ 4,475.00	$ 250.00	$ 2,409.00	$32,345.00

* Overhead includes an equated monetary amount for contributed space, personnel time, and supplies.

** Film stock cost is the value of the film titles contributed by the institutions prorated over a 5 year life expectancy. The majority of films contributed were purchased and used departmentally for 3 years prior to inclusion in the library collection.

TABLE II

Tri-College University Film Library

Use and Cost/Booking vs. Rental Cost/Booking

1974-75 thru 1977-78

Year	Titles Booked	Total Cost	Cost/ Booking	Avg. Rental* Cost/Booking	Total Rental Cost	Cost Avoidance
1974-75	1,218	$ 8,850.00	$ 7.26	$12.81	$ 15,602.58	$ 6,752.58
1975-76	2,301	26,435.51	11.48	12.15	27,957.15	1,521.64
1975-77	3,542	29,768.30	8.40	12.95	45,868.90	16,100.60
1977-78	3,808	31,731.88	8.33	15.35	58,452.80	26,720.92
Total	10,869	$96,785.69	$ 8.90	$13.31	$147,881.43	$51,095.74
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1978-79 (Projected)	4,000	$32,345.00	$ 8.08	$16.00	$ 64,000.00	$31,655.00

* Average Rental cost was derived from the cost of all films rented at Moorhead State University plus personnel costs and return postage costs/film.

TABLE IV

Tri-College University

Departmental Film Bookings

1977-78

	No. of Titles By Subject Heading*		No. of Bookings	
	#	%	#	%
Psychology/Counseling	82	9.0	685	18.0
Education	110	12.0	422	11.1
Biological Sciences	101	11.0	364	9.5
Art	61	6.8	259	6.8
Health Sciences	51	5.6	255	6.7
History	79	8.7	193	5.1
Sociology/Anthropology	85	9.3	159	4.1
Geography/Geology	47	5.2	147	3.9
Physics/Astronomy	34	3.7	136	3.6
Communications	13	1.4	128	3.4
Business/Economics	26	2.8	108	2.8
Philosophy/Religion	13	1.4	104	2.7
Humanities Literature	56	6.1	103	2.7
Subtotal	758	83.0	3063	80.4
Others	156	17.0	745	19.6
Total	914	100.0	3808	100.0

* 914 titles listed under 30 subject headings represent 496 actual titles in the catalog

TRI-COLLEGE UNIVERSITY LIBRARY COORDINATOR'S OFFICE

Coordination of Acquisitions

Cost factors in coordinating:

Professional time (3 lbns. x 2 hrs. x $10/hr.)	$ 60.00
Clerical time (1 student x 2 hrs.)	4.40
	$ 64.40

Savings in reduction of duplicate holdings, from Choice, May 1978

Of the 160 titles checked by 2 or more for purchase:

28.1%	45	titles were checked by 2, ordered by 1	=	$ 736.00
.6%	1	titles were checked by 3, ordered by 1		7.90
11.9%	19	titles were checked by 3, ordered by 2		284.50
-	-	titles were checked by 2, ordered by 0		-0-
40.6%	65			$1,028.40
34.4%	55	titles were checked by 2, ordered by 2		$1,808.40
25.0%	40	titles were checked by 3, ordered by 3		1,580.55
59.4%	95			$3,388.95

Had all copies of titles checked by 2 or more been purchased, TCU libraries would have spent $5,726.30. They reduced duplication costs by $1,028.40 for a 18% reduction.*

Savings ratio of dollars spent to coordinate to dollars reduced 1:15

Other factors in savings:
66 books not purchased saved $660.00 in duplicate costs for handling @ $10.00 per book including

- ordering
- receiving
- cataloging
- storage and maintenance - cost not known

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* Costs figured here are based on hardcover copy price; the library may have selected a paperback.

Consortium: University Center in Georgia, Inc.

Title of Program: Interlibrary Activities

Participating Institutions:

Agnes Scott College
Atlanta College of Art
Atlanta Public Library
Atlanta University Center
Columbia Theological Seminary
Emory University
Georgia Institute of Technology
Georgia State University
Ogelthorpe University
University of Georgia

Administrator: Mr. Albert B. Jones, Director, University Center in Georgia

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A. PROGRAM

1. History and Objectives

The University Center in Georgia (UCG), founded in 1938 and incorporated in 1948, is a general purpose consortium which coordinates a range of academic and administrative cooperative programs. Its purpose is to strengthen the member institutions and improve the quality of education programs in the state and region through cooperative undertakings and interactions.

Mindful of institutional individuality and sovereignty, the founders established specific objectives that included "... the raising of scholastic standards; the development of graduate work of high order so that the Ph.D. and Ed.D. degrees may be offered under conditions of high efficiency; the exchange, on a basis fair to each institution, of as many resources and facilities as might be practicable, including books, laboratory equipment, special services and the like; all done to eliminate needless overlapping and duplication of effort and expense."

2. Interlibrary Activities

Interlibrary activities in which UCS institutions participate include:

a. The Union Catalog

Begun in 1940, The Union Catalog is a location tool for books, microfilm music scores, and periodicals in the collections of 34 libraries in Atlanta and Georgia. There are over 2,405,000 entries in the Union Catalog, representing approximately 8,800,000 volumes on the shelves of the contributing libraries. Close to 200,000 entries are added yearly. The Union Catalog is open to the general public and to business enterprises, as well as educational institutions.

Considering the longevity, comprehensiveness, and widespread use of the UCG Union Catalog, it is a classic example of interlibrary cooperation for the nation.

b. Interlibrary Use.

The UCG libraries cooperative program permits the use of the library of any member institution by members of the faculty, research staff, and student body of other member institutions for the purpose of supplementing the resources of their own library. The use of another library is a privilege which may be extended in special circumstances relating to research. Each library is expected to meet the normal demands of its undergraduate and graduate students. The policy does not permit the use of another library for general study purposes or merely for convenience.

c. Interlibrary Loan Truck Service

The accessibility to library resources has been further enhanced by the Center's establishment of a library delivery service, a van which makes rounds three times weekly of all libraries of the Center to provide a rapid, convenient, and reliable means of effecting inter-library loans. This van also carries items among the various member institutions, and is often speedier than the mail for sending communications.

d. The Audio Visual Resources Pool

This new UCG program is being developed for the member institutions. It, too, will rely on the delivery van for distribution. Initiated in 1978-79, the Chemistry Interdepartmental Group is the first discipline to put the program into operation. The AV pool, housed at Emory University, is partially funded by a Metropolitan Foundation of Atlanta grant.

e. Related Networks

The Georgia Library Information Network (GLIN), established in 1969, was really an extension of the cooperation already existing between Public Library Services of the State Board of Education and the Union Catalog. GLIN's interlibrary loan function enables any library in Georgia to use the Union Catalog to find locations in the 41 libraries it now lists. The requesting library contacts the GLIN office and they, in turn, contact the Union Catalog if they do not own the book.

The Georgia Information Dissemination Center is another network that provides a computerized bibliographic search service for the faculty and graduate students at the state's 32 university system institutions.

Some of the UCG institutions also utilize the services of the Southeastern Library Network (SOLINET), OCLC (formerly the Ohio College Library Center), and the National Union Catalog (NUC).

B. COSTS

The UCG staff and institutional librarians were highly interested in the CIL study and were totally cooperative in supplying what limited data was available on library cooperation. However, the variety, intricateness, and particularly mercurial nature of interlibrary activities do not lend to precise record keeping within discreet categories of activity at the institutions or, consequently, to detailed cost analysis.

The budget for UCG in 1978-79 included $27,500 for Union Catalog operations, $8,470 for Interlibrary Loan Truck Services, and $40,300 for other non-library programs and administration. A formula based on a set fee, size of institution, and use of services was used to assess the institutions for their portion of the costs. No UCG funds were designated when the budget was prepared for the new Audio Visual Resources Pool, but a foundation grant helped to initiate the new service housed at Emory University.

C. BENEFITS

Statistics on use of the Union Catalog from 1971-72 through 1977-78 are:

	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976	1976-1977	1977-1978
Agnes Scott Col.	130	156	288	317	335	228	225
Atlanta Col. of Art	18	14	9	20	34	41	24
Atlanta Univ. Center	117	155	272	302	351	807	156
Columbia Theol. Sem.	30	33	108	234	64	99	154
Emory Univ.	1,609	1,651	4,140	5,283	4,596	4,468	3,764
Georgia Inst. of Tech.	617	772	1,151	993	1,203	976	1,335
Georgia State Univ.	887	951	1,414	1,632	2,086	2,205	1,917
Oglethorpe Univ.	24	13	86	142	120	118	123
Univ. of Georgia	287	350	1,125	2,190	2,509	1,967	1,302
Total Univ. Center	3,719	4,450	8,601	11,036	11,330	10,458	9,000
Total Non-Univ. Center	8,994	9,313	6,484	6,826	5,867	7,513	8,016
	12,713	13,763	15,085	17,862	17,197	17,971	17,016

Note: The University Center use did not peak until 1975-76, the second year SOLINET was in use. Although use was down somewhat in 1977-78, it is still well above pre-SOLINET use. It, therefore, seems too soon to assert that the availability of SOLINET to date makes the Union Catalog of less use to University Center libraries.

UCG institutions issue students and staff interlibrary cards on request but there is no way to quantify the interlibrary use that occurs because, especially in the Atlanta area, substantial walk-in use is reported where library materials are on site.

The Interlibrary Truck Service, in addition to providing fast delivery of books, audio-visual materials, and other library resources, also delivers mail, packages, and other small items. Records of the various uses of this service, however, other than the Union Catalog's statistics on delivery of books (9,000 one-way in 1978-79, 18,000 when returned) are not maintained.

In order to extract additional information on interlibrary loans, the Librarians of UCG members were asked to complete a short questionnaire in February 1979. The nine member institutions reported that 10,240 book requests from all other libraries were filled from July 1978 - December 1978. Of those 10,240 positive book transactions, 29.3% (3,003) were accommodated through the UCG Truck Service. The advantages of the service include avoidance of packaging and insurance charges. To get some data on this aspect of savings to the institutions, the librarians were asked to estimate the amount for the six-month period. The total for the nine institutions and UCG central office was $3,143.93. The annual savings should be more than doubled because January-June is busier than July-August.

The last item submitted as evidence of cooperative benefits from UCG is a single page of estimates prepared by the head Librarian at one of the member institutions. The Librarian commented: "These figures are based on assumptions and guesses. Please do not use them without acknowledging their 'softness'."

Interlibrary borrowing:
1,106 volumes borrowed
543 photocopied articles

Fifty percent of these transactions were with University Center institutions (est.)
553 volumes
272 photocopied articles
$1.00 per transaction saved in handling and mailing costs $ 825
10 percent of monographs eventually purchased
(55 x $300.00 per volume) 1,650

The speed of the transaction is considerably greater than with non-consortium interlibrary borrowing. Estimated value of time saved for each researcher is roughly $5.00 per transaction $825 x $5.00 4,125

Another factor in the speed with which the request is filled is our standing agreement to honor requests from University Center institutions as first priority.

Estimated value of interlibrary borrowing $6,600

Interlibrary use cards:
The value of direct access to other local libraries for our users is elusive. A conservative estimate would be to assume that each interlibrary use card issued to a graduate student or faculty member would have been at least one interlibrary loan had the interlibrary use card not been available. An estimate of $5.00 overhead cost for ILU is used.
435 ILU cards x $5.00 est. cost of ILU $2,175

I cannot estimate the value of direct access to research collections for the individual researcher.

Visiting scholar:		
Banquet and address by Mr. De Genaro for 20 library faculty at GSU		
$25.00 share of speaker's honorarium	$ 25.00	
20 x faculty x $5.50 per meal	110.00	
Morning discussion group with scholar	100.00	$ 235
Estimated value received from University Center		$9,010

D. VALIDATION

The data reported on UCG library cooperation were extracted from public and widely-circulated reports, from the Center's central office, from the Union Catalog's central office, and from the head Librarians of the member institutions.

Consortium: Union of Independent Colleges of Art (UICA)

Title of Program: Film Library and Service Center

Participating Institutions:

Atlanta College of Art
California College of Arts and Crafts
Center for Creative Studies-College of Art and Design
Cleveland Institute of Art
Kansas City Art Institute
Maryland Institute, College of Art
Minneapolis College of Art
Philadelphia College of Art
The School of the Art Institute of Chicago

Administrators:

Mr. Harry Critchfield, Coordinator, and
Mr. Dean E. Tollefson, Executive Director, Union of Independent Colleges of Art

A. PROGRAM

The Film Library and Service Center of the Union of Independent Colleges of Art was established in 1971. It was developed in order to make a collection of high quality films readily available for use by faculty and students of the member colleges for instruction and research.

The film collection is housed at the California College of Arts and Crafts (CCAC) and is administered by a staff person employed by the UICA.

A loose-leaf binder serves as a catalog for the 351 films and other instructional materials that are available through the Film Library and Service Center. The film catalog lists the title, running time, whether silent or sound, whether color or black and white, the film producer, and the copyright date. It also includes a brief paragraph describing the contents of the film. There is an alphabetical index to the catalog.

A breakdown of the film usage by member institutions for the three years 1976-77, 1977-78, and 1978-79 follows. Between 1976-77 and 1977-78 there was virtually no change in the usage by member institutions but there was a 13.7% increase between 1977-78 and 1978-79. Approximately 50% of this increase was accounted for by the addition of the Center for Creative Studies-College of Art and Design in Detroit, Michigan, to the UICA. Also, thirty-five new film titles were added to the library collection.

Film Usage by Institution 1976-79

	Number of Films Used		
College	'76-77	'77-78	'78-79
Atlanta College of Art (ACA)	95	130	94
California College of Arts and Crafts (CCAC)	758	661	625
Cleveland Institute of Art (CIA)	69	67	71
Kansas City Art Institute (KCAI)	167	84	62
Minneapolis College of Art and Design (MCAD)	131	162	247
Maryland Institute, College of Art (MICA)	119	103	124
Philadelphia College of Art (PCA)	155	156	151
School of the Art Institute of Chicago (SAIC)	64	190	271
	1,558	1,553	1,645
Center for Creative Studies (CCS)	--	--	121
			1,766
Percent increase (decrease)		(.01)	+13.7

Note: Each film ordered from the Film Center is shown on an average of 2.5 times per single distribution.

B. COSTS

The 351 holdings, collected over the last eight years, cost approximately $140,000 to purchase. The sources of funding for the acquisitions have included $32,000 from the Carnegie Corporation of New York, approximately $51,000 from the Federal government, $10,000 from other private sources, and $47,000 from the UICA institutions (slightly under $6,000 per member institution since the program began eight years ago).

This permanent quality film collection is enlarged each year as preferred titles are selected and purchased under a balanced acquisitions policy. To insure full involvment of each institution in the selection of new materials, the media center at each institution asks the faculty to recommend additions to the collection. The recommendations are forwarded to the UICA for integration into a master list. First priority consideration is given to multiple requests and the next priority is to insure a balanced collection.

All operational support for the Film Center is provided by UICA. The fee per institution for using the Film Center in 1977-78 was $915.78 which yielded a total income of $8,242.02 for the year. There is no additional charge for use of the films except for the return postage. This policy actually encourages frequent use of the resources.

The California College of Arts and Crafts, on behalf of UICA, houses and maintains the collection, distributes it to members, and keeps the film catalog current. The CCAC operational budget for 1977-78 was approximately $8,000.

C. BENEFITS

The foremost benefit of the cooperative film library arrangement is the permanent availability of a high quality film collection to the member institutions. Since the collection is open only to consortium members, material is limited only by the speed of delivery.

The cost savings to members is substantial. After paying the annual institutional membership fee, the colleges can use the collection as much as they desire. The more they utilize the collection the greater are their savings.

The table below lists the savings realized in two representative years by each member institution. The savings were calculated by assigning the lowest available rental charge from commercial sources, for each film used by a member institution from the Film Center. The total cost avoided during the 1975-76 year was $37,589. Three years later, 1978-79, the savings totalled $124,459.89, a 231.5% increase in dollar savings.

Avoided Rental Costs Per Institution

College	75-76	78-79
Atlanta College of Art	$ 2,209.50	$ 6,268.00
California College of Arts and Crafts	12,764.50	44,370.00
Cleveland Institute of Art	2,518.50	6,158.13
Kansas City Art Institute	5,508.50	4,168.75
Maryland Institute, College of Art	4,736.00	11,344.38
Minneapolis College of Art & Design	5,373.00	15,051.25
Philadelphia College of Art	3,084.25	8,802.50
School of the Art Institute of Chicago	1,394.75	18,475.63
		$113,638.64
Center for Creative Studies-College of Art and Design		9,821.25
	$37,589.00	$124,459.89

The per institution fee for the Film Center for the most recent year, 1978-79, was $915.78 against an average (mean) financial benefit of $12,913.10.

D. Validation

Annual data on the costs and usage of the films are provided by CCAC and UICA and are circulated among staff of the member institutions, all of which participate in this program.

Consortium: Greater Cincinnati Library Consortium (GCLC)

Title of Program; GCLC Film Division

Participating Institutions:

- Cincinnati Bible Seminary
- Cincinnati Country Day School
- Cincinnati Technical College
- College of Mt. St. Joseph
- Edgecliff College
- Northern Kentucky University
- Thomas More College
- University of Cincinnati
- University of Cincinnati, Raymond Walters Branch
- Ursuline Academy
- Xavier University

Administrator: Ms. Cheryl C. Albrecht, Coordinator, Greater Cincinnati Library Consortium

The program description and analysis also were prepared by Ms. Albrecht.

A. BACKGROUND

The Greater Cincinnati Library Consortium, founded in 1973, is a multi-type cooperative comprised of twenty-six academic, public, school, and special libraries. These libraries cooperatively offer their students, faculties, and research persons the following: (1) DIRECT LENDING - In most cases, a University I.D. card entitles a user to borrow materials directly from another GCLC library; (2) RECIPROCAL RETURNS - In most cases, material borrowed directly from one library may be returned at a more convenient GCLC member library; (3) EXPANDED INTERLIBRARY LOAN - The Consortium provides a daily delivery service among libraries. In most cases materials reach the user in 3-4 days for items requested through interlibrary loan; (4) FILMS DELIVERY SERVICE - The Consortium provides a film delivery service between the Public Library of Cincinnati and Hamilton County and member institutions; (5) COOPERATIVE FILM LIBRARY - Eleven member libraries are cooperatively purchasing educational films. These 16mm films are now available to faculty members of GCLC institutions.

In addition to user-oriented programs, GCLC also provides low-cost workshops for library staffs on topics of mutual interest and concern. The GCLC Serials Committee has established a deselection process whereby the members cooperatively review plans to add and cancel subscriptions to journals. The GCLC Library Resources Committee is presently defining special collections and subject strengths found in member libraries as well as developing a central Acquisitions Info File for materials purchased by member libraries costing in excess of $200.

B. PROGRAM

Eleven of the 26 consortium members began to acquire a central educational film collection in the spring of 1977. The Film Division continues to purchase films and had extended its collection to 129 holdings by the summer of 1979. The films are housed and maintained at Northern Kentucky University by the Educational Media Services Department.

The rationale for the development of the GCLC Film Library is as follows: (1) Non-print media collections are few in the area. Only one of the institutions of higher education in the Film Division has a film collection and at most 1/3 of the films (300 films) are suitable for the college level. The only other local film source is the Public Library of Cincinnati and Hamilton County (CPL). Although heavily used by Film Division members, many of the films are so heavily booked they are inaccessible and the short loan period makes it impossible to use the film in a second class session of the same class. Normally films owned by CPL are not duplicated by the Film Division. (2) Non-print media are an integral part of effective teaching/learning programs. (3) Non-print media are expensive to buy. (4) Films are expensive to rent. To rent a film from a commercial source will cost 10% of the film's purchase price or more, each time it is rented. Although universities will usually rent their films for much less, it is still possible to invest several hundred dollars, nearly the purchase price, in repeated rentals of a single film. (5) Film libraries are expensive to establish and maintain. Most colleges and universities cannot afford to establish a complete, up-to-date film library on their own in these times of budgetary insufficiencies; however, it is feasible to develop a cooperative film library by pooling resources, housing the films in one location, and avoiding duplication.

This study was concerned with point four above by analyzing the use of the collection over a two-year period and comparing rental costs to purchase costs.

C. COSTS

During the first year of acquisitions, 1976-77, the GCLC Film Division expended $7,589 for 21 films. In 1977-78, GCLC expended $22,255 for 74 films. The data reported in this case study are for the use of these films for the two-year period from July 1, 1977 to June 30, 1979. The initial 21 films were of course available for the entire two-year period, while the 74 films purchased in 1977-78 were not.

GCLC expended $11,389 for 34 films in 1978-79 and $5,363.39 for film inspection equipment and supplies. The budget for 1979-80 includes $6,313 for films and $2,650 for equipment and supplies with the possibility of an additional $5,000 available for film purchases. The 11 participating libraries share the costs of new acquisitions in proportion to their respective materials budget for a given year. This has been supplimented by several small grants.

No additional amount was assessed the Film Division for GCLC staff time spent on the program. All GCLC staff involved with the Film Division were already on the GCLC staff prior to the development of the Film Division. Apprixmately 5% of the GCLC Coordinator's time is spent on the Film Division per year and 5% of the GCLC Assistant's time. The dollar amount per year for salaries and benefits contributed from GCLC staff for the two-year period averaged $1,201. Neither was the Film Division assessed separately for the delivery costs, as the GCLC delivery system was an already established on-going part of GCLC service. If one prorated the delivery costs for the Film Division, approximately $4,910 was spent on the average per year. Northern Kentucky University, which has the advantage of immediate access to the films, stores and handles the films at no charge.

D. BENEFITS

GCLC keeps detailed records on the use of the films. From July 1, 1977 through June 30, 1979, the 95 films were shown 854 times. To analyze the costs and benefits, GCLC keeps records on each film in respect to: purchase price, current rental fee from a commercial vendor, the number of times the film was used, and the product of the rental fee times the number of times used.

In summary, the films which cost $29,843.50 to purchase would have cost $34,293.40 or 15% more than the purchase price to rent from commercial vendors over the initial two years of operation. The usage in the first year of the initial 21 films, which cost $7,589 to purchase, would have cost $7,337 or 97% of the purchase price to rent from commercial vendors.

The subsequent 74 films, which cost $22,255 to purchase, would have cost $18,155 or 82% of the purchase price to rent from commercial vendors in the first year of use. The objective of the Film Division was to break even over a three year period. The Division has more than met this objective.

The cost for delivering the films was paid from the central budget. Thus, the delivery charge does not discourage institutional use of the films. No effort is made in this analysis to deduct the delivery costs from the benefits because there also would be a postage and insurance or delivery charge for the institution to pay, in addition to the rental fee, if procured from a vendor.

E. VALIDATION

The data for the case study were provided by the GCLC Coordinator. The data on the film usage were widely disseminated within the Consortium and were received by the GCLC Film Division.

Table I
GCLC Film Usage *
July 1977-June 1978

	Purchase Price	Vendor Rental	Times Shown	Rental Cost	Total Attendance
1. Aging	$295	CRM $36	9	$324	237
2. Buddhism, Man and Nature	200	HAR $25	8	200	167
3. Business, Behaviorism and the Bottomline	259	CRM $36	4	144	79
4. Communication: The Nonverbal Agenda	450	CRM $46	20	920	716
5. The Crab Nebula	550	T/L $55	1	55	12
6. Einstein	385	T/L $40	7	280	347
7. Evolution of a Yogi	300	HAR $35	1	35	30
8. Flowing with the Tao	200	HAR $25	4	100	91
9. How Old is Old?	400	T/L $40	2	80	60
10. Leadership: Style of Circumstance	450	CRM $46	17	782	432
11. Methodology: The Psychologist and the Experiment	425	T/L $40	4	156	57
12. The Not-So-Solid Earth	400	CRM $39	2	80	60
13. One Step at a Time	395	MCG/H$39	13	507	383
14. Prejudice: Causes, Consequences, Cures	395	CRM $36	4	144	274
15. Productivity and the Self-Fulfilling Prophecy	450	CRM $46	20	920	453
16. Sex Role Development	295	CRM $36	10	360	415
17. Symmetries of the Cube	185	IFB $10	0	0	0
18. Token Economy	295	CRM $36	15	540	402
19. Transactional Analysis	450	CRM $46	16	736	402
20. Up the Organization	360	T/L $35	16	560	365
21. Women in Management	450	CRM $46	9	414	287
	$7,589.		182	$7,337.	5,372

*The same data are available on GCLC use of 95 films (including the 21 above) through June 1979. The additional data were not included here in tabular form because of the length.

Consortium: Rochester Regional Research Library Council (RRRLC)

Title of Program: Media Project

Participating Institutions:

- SUNY at Brockport
- College Center of the Finger Lakes
- Colgate Divinity School
- Convalescent Hospital
- General Railway Signal
- Highland Hospital
- Hobart and William Smith Colleges
- Kodak Research Library
- Lincoln First Bank
- Monroe Community College
- Monroe Developmental Center
- Nazareth College
- Roberts Wesleyan College
- Rochester Institute of Technology
- Saint John Fisher College
- SUNY at Geneseo
- University of Rochester

Administrator: Ms. Marlene Hansen, Special Projects Director, Rochester Regional Research Library Council

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A. Program

Rochester Regional Research Library Council, founded in 1966, is one of nine multi-type regional library councils that blanket the State of New York. RRRLC is comprised of 53 academic, public, special, research, and system libraries. The Council currently employs 16 staff and has an annual budget in the range of $160,000 with support coming from Federal, state, and foundation agencies.

The Media Project reported here, started in October 1973, in only one of many interlibrary programs of the Council. One service that is related to the Media Project is a courier system which serves several interlibrary needs including the delivery of most of the films. The intertwining of the Council's various projects and support budgets places limitations on the availability of specific data for project analysis. Therefore, the data presented herein are limited to one dimension of the cost effectiveness of the centralized collection of media.

B. Costs

Since initiating the media collection in 1973, RRRLC has expended $100,316 to purchase 296 films. The average cost per film is $339. The Council has set a user fee of $5 to $6 each time a film is loaned. The purpose of the fee is to generate some additional income to add new films to the collection. There is no pretense to establish usage of the media collection or other Council activities as self-supporting endeavors. The majority of the funding for RRRLC comes from the public sector through the Department of Education of New York State.

C. Benefits

Table I, generated by RRRLC for use and dissemination in the Rochester region, reports the names of the 18 institutions that used films during 1978-79, the number of times films were used by each institution, the user fees charged to each institution, the user fees that would have been charged to each institution had commercial vendors been used, and the difference between the fees charged by RRRLC and the fees that would have been charged by commerical vendors. The difference of $47,335 is viewed by RRRLC as a savings to the participating institutions for the year 1978-79.

D. Validation

The data reported in the case were supplied by the Special Projects Director. The data were prepared for a reporting to the RRRLC Media Committee and to the participant institutions.

Table I
RRRLC Film Usage
July 1, 1978 to June 30, 1979

Member	Films Used	RRRLC Cost to User	Commercial Vendor Fee	Savings to User
SUNY Brockport	292	$1,460.00	$12,652.00	$11,192.00
College Center of Finger Lakes	171	855.00	6,472.00	5,617.00
Colgate Divinity School	23	115.00	837.00	722.00
Convalescent Hospital	4	20.00	147.00	127.00
General Railway Signal	1	5.00	55.00	50.00
Highland Hospital	3	15.00	136.00	121.00
Hobart & William Smith Colleges	27	135.00	831.00	696.00
Kodak Research Library	1	5.00	20.00	15.00
Lincoln First Bank	2	10.00	49.00	39.00
Monroe Community College	74	370.00	3,116.00	2,746.00
MCC Student Association	1	5.00	50.00	45.00
Monroe Developmental Center	1	5.00	46.00	41.00
Nazareth College	84	420.00	3,494.00	3,074.00
Roberts Wesleyan College	31	155.00	1,032.00	877.00
Rochester Institute of Technology	319	1,595.00	13,068.00	11,473.00
Saint John Fisher College	51	255.00	2,105.00	1,850.00
SUNY Geneseo	158	793.00	6,588.00	5,795.00
University of Rochester	88	440.00	3,295.00	2,855.00
TOTAL	1331	$6,658.00	$53,993.00	$47,335.00

Consortium: New Hampshire College and University Council (NHCUC)

Title of Program: Inter-Campus Delivery System

Participating Institutions:

- University of New Hampshire
- New Hampshire State Library
- Plymouth State College
- Keene State College
- New England College
- Franklin Pierce College
- Colby-Sawyer College
- Merrimack Valley Branch, UNH
- Rivier College
- Daniel Webster College
- St. Anselm's College
- Notre Dame College
- New Hampshire College
- Nathaniel Hawthorne College
- NHCUC Central Office
- School of Continuing Studies, UNH

Administrator: Mr. Douglas Lyon, Associate Director, New Hampshire College and University Council

A. Program

The New Hampshire College and University Council (NHCUC), founded in 1966, is a general purpose consortium comprised of twelve public and private colleges and universities. The Council has been a national leader in developing administrative, academic, and student cooperative programs.

In the area of interlibrary cooperation, the NHCUC programs were recently described in a consultant's report: "All participating libraries are open to all members (students, faculty, staff) or other consortium members, for loan as well as reference purposes. Materials are loaned in bulk from one institution to another to meet extraordinary demands, such as a new course or curriculum. Interlibrary loans are carried by van on a schedule providing several deliveries a week. A Union List of Serials has been compiled. Potentially of special import to the whole state is the agreement to joint subject-area purchasing, with the various institutions responsible for special acquisitions in assigned subjects."

The report further urged that a staff person be added to the State Library who when assigned to the consortium, would facilitate joint subject-area purchasing for the colleges and the State Library. The State maintains a union catalog of books but the colleges have not developed a union catalog because of the expense. One aid to locating books for loan has been the membership of several institutions in OCLC.

The Council also has started developing a central film collection.

Central to but broader than the interlibrary cooperation is an intercampus delivery system which serves the 12 member institutions, the Council's central office, and the State Library. The service, initiated in 1969, delivers books, periodical materials, films, mail, packages, and even furniture if it can be accommodated on the truck. The number of items delivered in 1977-78 was 79,866. This represented a 15.2% volume increase and a cost item reduction of 1.8¢ from the previous year. A breakdown of the items delivered follows:

Items	1977-78	% Change from 1976-77
Books carried	16,809	10.0%
Mail carried	36,003	30.1%
Packages carried	27,054	17.8%
Total	79,866	15.2%

The mail category increased more than the others, due to increasing postage rates. The number of items delivered to each institution in 1977-78 was:

Institutions	Items Delivered	% of Total
University of New Hampshire	27,805	34.8
New Hampshire State Library	6,959	8.7
Plymouth State College	10,119	12.7
Keene State College	12,300	15.4
New England College	1,799	2.3
Franklin Pierce College	931	1.2
Colby-Sawyer College	1,003	1.3
Merrimack Valley Branch of UNH	9,702	12.1
Rivier College	1,517	1.9
Mount St. Mary College	843	1.1
St. Anselm's College	1,840	2.3
Notre Dame College	612	.8
New Hampshire College	1,413	1.8
Nathaniel Hawthorne College	892	1.1
NHCUC	495	.6
School of Continuing Studies, UNH	1,133	1.4
Total	79,866	100.0

B. Costs

The University of New Hampshire, which administers the delivery system for the consortium, reported the following costs for 1977-78:

Direct costs (vehicle amortization, gasoline, personnel)	$15,500
Indirect costs (registration, insurance, supervision)	2,687
Total	$18,187
Cost per item	22.8¢

The costs estimated for 1978-79 were:

Direct costs	$16,700
Indirect costs	2,654
Total	$19,354

The assessment of charges to each institution for 1978-79, based on the size of institution and the number of deliveries, was set as follows:

NHCUC	$ 6,000
University of New Hampshire	2,654
Plymouth State College	1,863
Keene State College	2,114
New England College	607
Franklin Pierce College	407
Colby-Sawyer College	415
Merrimack Valley Branch of UNH	1,415
Rivier College	474
Daniel Webster College	257
St. Anselm's College	612
Notre Dame College	270
New Hampshire College	862
Nathaniel Hawthorne College	404
State Library	1,000
Total	$19,354

C. Benefits

The most significant and substantial benefit of the NHCUC delivery system for 1977-78 unquestionably was the contribution made to the educational goals of the institutions as a result of providing students and staff with access to an additional 16,809 books. There is no established procedure to translate this statistic into a dollar value.

Though the data are not comparable, one oversimplified measure might proceed along the following line of reasoning. In many of the larger institutions in the United States where there is a substantial demand for their library books, it is common practice to charge $8 per transaction. Columbia University set its fee in 1979 at $10. Had the 16,800 books been borrowed from an Ivy League institution at $8 each, the charge, in addition to return postage and packaging, would have been $134,400.

It is recognized that the interlibrary loans also represented to the NHCUC institutions in staff time but the costs were marginal. Stated differently, the institutions would not have reduced their staffs in the absence of a book exchange system, but they would have diminished the services made available to their students and faculties and they may have had to increase staff.

A more generous assessment of dollar benefits accruing from library cooperation would be to relate the value of the NHCUC exchanged books to the costs that would be incurred to order, receive, catalog, store, and maintain 16,800 additional library books ($15 to $20 each, not including storage and maintenance). Such a comparison of statistics, or some percentage thereof, is not unreasonable when it is considered that 50% of the books purchased by many libraries are never checked out even once. An interlibrary loan, on the other hand, is not initiated until a request has been made for use of a book.

There are other benefits that accrue from the intercampus delivery.

1. The fast, dependable delivery service directly from one campus to another, most often within the same day or within a 24-hour period, facilitates more extensive use of the interlibrary loan of books, periodicals, films, and equipment than would be the case if the U.S. mail were used. The delivery system expedites requests for library materials, delivery of library materials, and return of library materials.

2. The system avoids most of the usual interlibrary mailing costs of packaging, postaging, labeling, insuring, and delivering of library materials to the post office. Costs for supplies, postage, and personnel are minimized.

3. The system lessens the costs of institutions to purchase, store, and control postage.

4. The average cost of 22.8¢ per item handled in the delivery system provides the following approximate postage savings when postage is estimated in the following manner:

16,809 books @ $ .62 ea. (average 1.5 lb. book at special 4th class book rate)	$10,421.58
36,003 mailings @ $ .15 ea.	5,400.45
27,054 packages @ $1.72 ea. (average 8 lb. package with ½ by 1st class priority mail and ½ by 4th class parcel post)	45,532.88
	$62,354.91
Total program costs	18,187.00
Total postage savings	$44,167.91

D. Validation

Data on the use and costs of the Inter-Campus Delivery System were generated by the University of New Hampshire and were circulated by the NHCUC to the Presidents, Business Officers, and Librarians of the NHCUC member institutions. Each institution paid the charges assessed to it for 1978-79 without question. CIL is responsible for the analyses.

Consortium: Dayton-Miami Valley Consortium (DMVC)

Title of Program: Libraries Delivery System

Participating Institutions:

- Air Force Institute of Technology
- Central State University
- Clark Technical College
- Educational Opportunities Center
- Kettering College of Medical Arts
- Sinclair Community College
- Southern State College
- University of Dayton
- United Theological Seminary
- Urbana College
- Wilberforce University
- Wilmington College
- Wright State University
- DMVC Central Office
- Wright-Patterson Air Force Base

Administrators:

Mr. Ronald L. Oldiges, Purchasing and General Services, Wright State University

Dr. Pressley McCoy, President, Dayton-Miami Valley Consortium

A. Program

The Dayton-Miami Valley Consortium (DMVC) founded and incorporated in 1967, is a general purpose Consortium involving 15 member institutions.

Making higher education more widely available to residents of the Miami Valley, strengthening the service capabilities of its member institutions, and promoting community service projects were the stated goals of the DMVC when it was incorporated in 1967.

The DMVC Librarians have been the most active of the groups that meet under the auspices of the Consortium. Their most ambitious project has been the development of a library van delivery system that provides daily transportation service to the Consortium's member colleges. Other cooperative library activities have included: purchasing of materials; reference services; photo-directories; central resource or storage center; reciprocal borrowing privileges; expanded interlibrary loan service; joint research projects; special communications services; subject specialization in acquisitions; mutual notification of purchase or intent to purchase; publication program; and personnel training and recruitment.

The DMVC Libraries Delivery System is administered by Wright State University for the Consortium libraries through a contractual arrangement. Data for the Delivery System were provided by Wright State University. Data were not acquired on other interlibrary activities.

B. Costs

Wright State University reported the costs for the DMVC Libraries Delivery System for 1978-79 and projected them for 1979-80 as seen in Table I.

In submitting this statistical information to the DMVC central office, Mr. Oldiges stated in a cover letter: "Assuming there are no drastic price increases in total direct costs, we will attempt to hold the price of $18,440 per year for both fiscal years. This price represents an increase of 15.75% over last year's cost of $15,930. However, if we can maintain the price at $18,440 for both years, the average annual increase is reduced to 7.87%. In view of inflationary price increases, we have done our best to trim costs and keep this a profitable operation for the DMVC.

I believe this delivery system has proved to be successful in every respect. Since complaints from users are practically non-existant, I assume everyone is happy with our service. In the last twelve months, over 18,125 packages have been shipped on this service for an average cost of $.88 per package. Most recent figures show we can expect a 20% increase in packages next year. If this trend continues, the cost per package will decrease despite the increased member cost."

The basis for sharing the costs for the daily delivery system among the participants is to divide the total annual costs, $18,440, by the number of daily stops. In 1978-79 there were four pairings of institutions where two participants would share one mutual pickup and delivery station. Thus, on this basis, the costs per institution (or pair of institutions) was under $1,600 for 1978-79.

C. Benefits

The most concrete evidence that the program is cost effective for the participants is that they underwrite the costs directly from their institutional budgets. The program has completed four years of operation and continues to expand.

Since the libraries are the biggest users of the intercampus van, the most important benefit is that of furthering the educational goals of the regional institutions. Because of the system, students and staff have access to library resources that they would not have otherwise. Additional benefits accrue to users because the van is more efficient time-wise and is less expensive than use of the mail or other commercial carriers. The van system, compared to users making individual trips to other libraries, also conserves energy.

The van delivered approximately 20,000 "items" during 1978-79. The Delivery System uses preprinted labels and a large plastic tub for each institution to facilitate and protect the delivery of books, periodical materials, film, bundles of mail, and other packages. Because an item often will consist of a package of library materials or a packet of mail or hundreds of pamphlets, the 20,000 number is misleading. In addition to the low transportation cost of less than $1 per item, the libraries and institutions save by avoiding packaging and insurance costs.

D. Validation

All of the DMVC Delivery System data were supplied by Wright State University, which administers the program for the Consortium. The Wright State University data also are a necessary part of the records of each participant institution which has to pay its proportionate share of the costs.

Table I

TWO-YEAR COST SUMMARY

	1978-79 7-1-78 to 6-30-79		Estimated 1979-80 7-1-79 to 6-30-80
Wages - 1 full-time driver includes 21.6% benefits and 40¢/hr state mandated increase	$11,736	(+5%)	$12,323
Operating Expense 40,000 mile/year @$.058/mile	2,320	($.060/mile)	2,400
Insurance - $100 deductible	570	(+12%)	638
Capital Use - 1st year only $4,700 van cost @ 6.75%	317		0
Depreciation Expense 2 year van replacement $4,700 purchase cost 2,300 salvage 2,400 2 year dep. 1,200 1 year dep.	1,200		1,200
Special Expense - 1st year only Striping and lettering of van	225		0
Administrative Expense 12% of total direct cost	1,964		1,987
TOTAL	$18,332		$18,545
AVERAGE		$18,440	

Consortium: Central Pennsylvania Consortium (CPC)

Title of Program: Journals Analysis, Reduction, and Sharing Project

Participating Institutions:

Dickinson College
Franklin and Marshall College
Gettysburg College
Wilson College

Administrator: Ms. Beverly D. Eddy, Director, Central Pennsylvania Consortium

(Note: Ms. Eddy became CPC Director in 1978. Mr. Arden K. Smith was Director when the project was initiated and implemented.)

A. Program

The Central Pennsylvania Consortium, founded in 1968, is a general purpose Consortium of 4 four-year, church related institutions.

The planning for the project described in this case study began in 1971-72, when the CPC academic deans began to discuss increasing library costs and especially those in the area of journal subscriptions. Later in the same year, the CPC Board (the four institutional Presidents) designated library cooperation as a high consortium priority for analysis and action. At the urging of the consortium Director, a directive in writing was issued by each President to the Librarian to initiate plans for journal sharing.

It became apparent that cooperation from the faculty also was essential because no Librarian was willing to dictate which Journals would be dropped. Too, there were discussions as to whether any journals should be discontinued in the name of economy; but those discussions ended when it was realized that each college had placed a ceiling on the budget for journals.

Over the four-year period 1972-1976, the chief college Librarians, faculty members, and the consortium Director reviewed all journals in all disciplinary areas subscribed to by the four college libraries. The purposes were to determine 1) which existing journal subscriptions should be maintained, and at which colleges, 2) which subscriptions might well be dropped at one college and be allowed to be retained at one of the other CPC college libraries, and 3) which subscriptions might profitably be dropped altogether.

The Consortium eventually evolved a thirteen-step process for every departmental area.

1. Each library received departmental lists from the other three in agreed upon areas of responsibility, and
2. Prepared a first draft of the composite list.
3. Each library sent a composite list to the other three libraries for verification.
4. The revised list was then returned to the library responsible for that area.
5. The revised composite list with prices was typed on worksheet forms in each library and sent to the Consortium office.
6. The Consortium Office reproduced worksheet copies and sent them, with a cover letter, to the four deans who
7. Distributed them to Librarians and faculty members.
8. The faculty members returned the form to their Librarians who, in
9. Conference, tallied and recorded the final commitment.

10. In their area of responsibility, each Librarian prepared the final list of CPC holdings without prices and

11. Sent it to CPC office.

12. The Consortium office reproduced the final CPC holding lists by department and

13. Sent them to the four deans and all department chairpersons with a cover letter.

What may be indicated by the number of steps shown, but which needs underlining here, is that 1) the amount of time spent by each of the Librarians on this project was considerable and 2) the expert judgment by the Librarians, at all stages, was of critical importance to the eventual validity and success of the total project.

B. Costs and Benefits

By the end of the four-year period, all departments at each of the four colleges had been surveyed and the Consortium had 1) generated among the four colleges a continual net savings of $10,000 per year in terms of 1972-73/1975-76 dollars, 2) brought the library staffs into a closer, more richly cooperative stance, 3) generated an accurate, up-to-date list of all journal subscriptions and back runs, by department, across all four campuses, and 4) given specific data on cost effectiveness to the Directors of Development for their use in fund raising.

The yearly savings can be likened to an increase in endowment of $200,000 presuming a 5% return on investment. The $10,000 saved yearly did not remain idle.

Instead, it was quickly reinvested, in a very few cases, within the area of new journals but largely, unfortunately, simply to meet the increased costs of journal subscriptions across the board.

It should be noted that neither the time invested by the Librarians, nor the benefits of the Librarians getting to know each other better were calculated in the $10,000 savings. While the costs in terms of time spent by library staff members were notable, so was the resulting benefit in their getting to know more about each other's operations, work habits, and the specific operating procedures at the individual libraries. All meetings to consider the lists of periodicals were held in rotation at the four different campus libraries and included informal library tours. Extending from this process of working with each other, the four Librarians presented to the Consortium, and had approved, a staff development proposal whereby virtually all staff members of each of the four college libraries would spend one to three days at one or more of the other CPC libraries, working alongside their counterparts (Catalogers with Catalogers; Reference Librarians with Reference Librarians), observing their methods, sharing ideas, and analyzing similar problems. As a result of this procedure, additional degrees of efficiency and effectiveness among the library staffs were instigated which, while difficult to quantify in dollar terms, are well beyond the total of some $500 spent to fund the joint visitation project. Also emerging from the project was an up-to-date listing of all journals available on each campus, by disciplinary area, including back runs, to be put in the hands of every faculty member.

C. Validation

The data pertaining to the project and related reports were widely distributed among the four college Presidents, Deans, Librarians, and faculty during and following the four-year period for which information was reported.

Conclusions

There are a number of other excellent examples of cost effective library cooperatives that were not included in this report as case studies. One example is the unification of the technical libraries of Cedar Crest and Muhlenberg Colleges in Pennsylvania. "A Study for Sharing Costs of Library Staffing" by Pat Sacks in 1977 found that the two colleges saved $76,309 over four years by unifying the technical services staffs, by sharing the costs of one Chief Librarian, and by eliminating the double need for catalog cards and National Union Catalog subscriptions. Henry Acres, former Chancellor of the bilateral, commented: "We lowered costs and improved services simultaneously. The effects of this new library organization, of course, will continue annually; that is, had we not done it, the two colleges would now have a greater number of library employees than the new joint operation requires."

An example of a totally centralized library is the Auraria Higher Education Center in Denver. See Chapter VI for that case study.

The Pittsburgh Regional Library Center, the Atlanta University Center, the Charleston Higher Education Consortium, and others volunteered to provide library information but could not be included as case studies because of study and time limitations.

In several other cases, library consortia would not permit a visitation for review because of sensitivities and circumstances. Library cooperation, in addition to being highly complex, can be equally political.

When an academic library is considering ways to improve services, it should look at possible internal changes, as well as at potential cooperative relationships. Striking the central nerve of many Librarians in 1975 were two papers by Daniel Gore, who then was the Librarian at Macalester College.[14] He contended that, in general, 40% to 50% of the attempts to use academic libraries are frustrated by the unavailability of the book being sought. By keeping records on which titles are used more frequently, Gore advocated buying multiple copies accordingly. He also reported that Macalester College improved its availability rate from 58% in 1973 to 88% in 1977 by increasing the number of frequently used books.

Another impressive internal management system is LENDS (Library Extends Catalog Access and New Delivery Services) at Georgia Institute of Technology. LENDS combines for faculty, researchers, and graduate students remote bibliographic access and delivery outside the library to the resources within the library.

A study of the use of the system in 1974 indicates a $249,000 savings in faculty time alone.[15] The delivery system is further enhanced by conversion, now 98% complete, from a centralized card catalog to a microfische catalog for the Institute's 900,000 titles. The library produces 125 sets of microfische (172 cards per set) for use on and off the campus for $64 per set.

The $8,000 expenditure, part of which is recovered from selling the microfische sets to off-campus users, is $10,000 less than the previous annual costs of maintaining the central card catalog. Machines to read the microfische, which cost the library $700 each, are stationed throughout the large campus. Thus, each station has its own "card catalog" and has access to prompt delivery, sometimes within the hour, through LENDS. The internal delivery system is not applicable to small institutions but it and the catalog system have implications for consortia.

A library cooperative that has been deemed cost ineffective is the Hampshire Inter-Library Center. HILC, founded in 1951, served as a central collection of research materials, mostly periodicals and serials. A variety of changing conditions which have resulted in limited use of the holdings, and consequently a high per-use cost, has led to a decision to decentralize the collection by dispersing materials to members of Five Colleges, Inc. It should be noted that other forms of library cooperation will be continued in the Massachusetts Valley.

If there is one word to characterize library operations and library cooperation in the future, it is uncertainty. In order to make sound decisions about efficiency of operations, it is certain that libraries need to improve their record keeping. For example, George Wethersby found in a study of California State College libraries that it cost $13 to check out a book. He concluded it would be cheaper to give the patron the book. Because of so many rapidly changing conditions, it also is important to review recent data for decision making. A case in point is the 25% increase in postal rates effective in July 1979. This change, coupled with the rate increases of Columbia University and other large libraries to protect their collections, are directly related to the effectiveness of intercampus delivery systems described in this chapter.

The bias of the Council on Library Resources is stated in its last Annual Report:

> "For many librarians, the key to survival in the tough years ahead appears to be collective action and an increased sharing of resources - the development, according to one university librarian, of 'shared dependencies'."

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CHAPTER IV

STUDENT SERVICES

Introduction

Student Services are providing a fertile field for collegiate cooperation. Historically, such services date back to the time the institutions were established. The rapid development of these services emerged along with the active extension of humanizing practices, beginning in the 1930s, and kept pace with the advancement of the social sciences.

In the decade of the fifties and sixties, these services exploded, as did enrollments, the wholistic view of learning, and the needs of learners. This expansion attempted to keep ahead of students' needs, as well as of institutions as the numbers of enrollees grew (although not always the quality of student life). Depersonalization was a major challenge to institutions which were expanding their curricular offerings and facilities and increasing their faculty. Student services attempted to bridge the gap that grew up between size and effectiveness, complexity and opportunity.

With adequate funds, such expansion of student services was possible; in the decade of the 70s, however, adequate funding rapidly diminished.

Yet, the need for such services continued. So, how to manage? How could postsecondary education provide the range and quality of services sought, while holding the line or reducing expenditures and either maintaining or improving those services? Changing marketing strategies and even more rapidly changing personnel, technologies,and conceptual developments required a careful re-thinking of student services by institutional leadership.

To those leaders engaged in substantial relationships with others in their community of colleges, their consortia work proved a natural base on which to build selected functions within a comprehensive range of student services. To the extent that care was exercised in the analysis of the operations of a given service, and administrative follow-through occurred to define appropriate sharing in these operations (a sharing of clear ideas, staff and funds), to that extent, substantial student services in consort emerged.

This chapter documents five areas of services, including the economic advantages and social services accruing to those institutions (and their clients: students, parents, counselors, and employers) which have utilized their collective capacities and resources.

The areas are: Registrar, Admissions, Financial Aid, Placement, and Psychiatric Services. These areas emerged early in cooperative work because of a need to offer greater service, a growing limitation of funds, and the kinds of services in which the functions are amenable to objective analysis, systematization, and shared use, and, also, because of the natural propensity of the people involved to "see it whole."

The capacity and skills of second and third echelon leadership in this area have also allowed for the management and utilization of relationships where the complexities of interdependence were present. Although all the influences leading toward preciousness exist in student services, as they exist in other administrative and instructional areas, these special capabilities by persuasive leadership overcome them. The record of achievement documented in this chapter provides evidence of substantial gain to the institutions reviewed and to their student beneficiaries.

The areas of service selected have been identified in seven different consortia which are located in different sections of the United States. They reflect cooperation among public and private colleges and universities, liberal arts and special purpose institutions, and programs serving both a general and specialized population.

Some consortia programs will be mentioned only briefly. Their services certainly deserve acknowledgement. The findings of those consortia, however, were not singled out for extensive analysis since their joint work is emerging and an analysis of their full potential is not possible at this time.

As colleges and universities confront the economic demands of the 80s, each aspect of their institutional offerings and administrative services will be reviewed to ascertain its value. The reader is invited to analyze the detailed operation of the programs described here. Through this presentation, will be documented the useful ways in which the experience of providing student services in consort. As institutional budgets are constricted, valuable services to students should not be strangled. To discontinue such services merely because institutional leadership cannot perceive alternative strategies for organization and operation would be at once counter-productive and a tragedy. The alternatives described here offer a reconception of these issues and problems, arranged in a manageable order.

There is a special need now for institutional Board Chairmen, Presidents, Vice Presidents, and Deans to advance the exploration and definition of joint services in designated areas by calling for a careful detailing of the systems and procedures used in each service function. Analysis of the commonality of these functions in comparison with another or other institutions in a group they define as their community will give specification to those functions which are amenable to development in consort. Human interaction can become increasingly rewarding and productive when this information is used in a progressively interreliant way. Consortial relationships in this arena facilitate organizational development of the kind so greatly needed for the dynamic decade ahead.

Consortium: Union of Independent Colleges of Art

Title of Program: Cooperative Admissions Program

Participating Institutions:

Atlanta College of Art
California College of Arts and Crafts (Oakland)
The Center for Creative Studies-College of Art and Design (Detroit)
Cleveland Institute of Art
Kansas City Art Institute
The Maryland Institute, College of Art (Baltimore)
Minneapolis College of Art and Design
Philadelphia College of Art
The School of the Art Institute of Chicago

Administrators: Mr. Dean E. Tollefson, Executive Director, Mr. Jerry D. Tuttle, Assistant Director, Union of Independent Colleges of Art, and Ms. Barbara Heuser, Chairperson of the UICA Admissions Committee (a rotating position).

A. Program

The Cooperative Admissions Program of the Union of Independent Colleges of Art (UICA) was established in 1970 by the member colleges' Presidents. The Presidents, as the consortium board, determine policy for the program; the admissions committee, consisting of the Directors of Admissions, plans program activities, and the UICA staff provides guidance and administrative services that, for the most part, the colleges cannot afford except through the cooperative program.

The program's objectives are:

1. To enlarge the pool of applicants through a nationwide recruitment program that supplements the recruitment conducted by each college;

2. To improve the quality of admissions efforts through the pursuit of research on the market for art students, and through the provision of training for staff of the member colleges.

Through their combined publications on admissions and their cooperative recruitment visits, the member colleges enlarge their contacts with high school students and others interested in visual arts education. The UICA admissions committee plans joint and coordinated recruitment travel. Each member college invests from two to four weeks annually in staff travel on behalf of all member colleges. The colleges pool their representation at portfolio days, which bring together high school students and others interested in the visual arts, and at college fairs. Because each college thus recruits in geographic areas which it cannot otherwise cover, it enjoys a national market for student recruitment while its costs are limited essentially to regional recruitment. In 1977-78, for example, all nine colleges had exposure to 24,000 high schools and 1,100 junior and community colleges. The program also offers research on trends in student population, and it surveys students as to their expectations and needs.

B. Costs

The UICA admissions budget is supported by a portion of the annual institutional membership fee. This amounts to $10,000 from each member college (total, $90,000). Revenues also included $31,000 (second year) of a three-year grant awarded to the UICA by the Carnegie Corporation of New York. In 1977-78, that grant supported fully the consortium's expenditures of $19,000 on market research and contributed $12,000 toward the $50,000 for publications costs. The expenditures of the UICA central staff on the program in 1977-78 were:

Salaries and fringe benefits	$ 25,000
Travel for the colleges' staff members	10,000
Office operations	16,000
Publications	50,000
Research	19,000
Total	$120,000

These amounts show only the program's direct costs. Salaries and fringe benefits include a large part of the salary and fringe benefits of the UICA's assistant director and part-time secretarial support. Travel was by admissions officers of the nine colleges; the limited costs of travel by the UICA Assistant Director to assist the colleges are treated as office operations of the program. Research activities deal with the market for student applicants. Publications included brochures, posters, foldouts, and other literature used by the admissions staff of the member colleges to supplement the catalogues and other materials published by the member colleges.

The indirect costs of the program - those expenses not allocated directly to the program - have not been estimated, since the member colleges do not record the indirect costs of their admissions programs. If the individual costs of the UICA program had been estimated, they would have included allocations of UICA expenditures on facilities, on travel by officers, on miscellaneous supplies, and on general administrative expenses such as insurance premiums and the auditor's fees.

C. Benefits

To estimate the benefits received from the program by the member colleges, a methodology has been developed whose cornerstone is the replies to a question asked by representatives at the member colleges: "If the UICA were dissolved, what would be the costs to your college of replacing, without any cooperation with other colleges, the services received in 1977-78 from the cooperative admissions program?" Presidents or academic officers, chief business officers, and admissions directors were asked to estimate the dollar costs of this hypothetical "replacement program," bearing in mind that the cooperative program's benefits are not limited to the activity conducted by the UICA central staff, but also include recruitment travel, representation at portfolio days and college fairs, and various other activities which benefit the other member colleges. For analysis, the question was subdivided into:

- What would be the costs in salaries and fringe benefits at your college, of reproducing the $25,000 of staff services provided by the UICA staff?

- What would be your costs in replacing the travel and representation by admissions officers of the eight other colleges which have given your college a nationwide recruitment program?

- What would be your costs in replacing the UICA publications with publications on your college for use in regional recruitment and in the nationwide recruitment program that you would establish?

- What increases, if any, would there be in your office costs and general expenses?

To obtain answers, a CIL team representative met with the UICA committee of Business Managers, the Executive Director met with Presidents or Deans, and visits were made to six member colleges. One college supplied the estimates without a team visit and two made no estimates, one because it had joined the UICA too recently to make the requested estimates.

The results of the analysis are shown in Table I. Part I of the Table shows direct costs of admissions programs conducted at the seven colleges. Approximately 90% of those costs are for the colleges' regional recruitment and admissions activities, and about 10% are given to the cooperative program. Part II gives estimates on replacement costs. The estimates rest on the assumptions that the cooperative program did not exist in 1977-78, that each college had replaced the program with its own nationwide recruitment research and publications program aimed to yield the benefits of the cooperative program, and that it had continued to operate its regional recruitment program whose costs are shown in Part I. The difference between actual costs in 1977-78 and estimated costs under these assumptions are set out in Part III. Those amounts show the extra costs that each college would incur if it operated a nationwide recruitment effort which consisted of the activities of benefit to the college provided by the cooperative program in 1977-78.

The Part III amounts are, in other words, the estimated dollar benefits received by each college from the cooperative program. These are net benefits - the value received over and above the dollar outlays in 1977-78, including the $10,000 fee paid by each college to UICA in support of the cooperative admissions program and the contributions from its own admissions program to the cooperative program.

The smallest of the seven reporting colleges (College C) perceives fewer advantages in the UICA admissions program than do the other six. The Admissions Director affirms that there are major elements of the program which have no value for his admissions needs. If the cooperative program were dissolved, College C would replace it with a more modest program which would increase its admissions costs by $49,500. College C believes that this amount is a fair estimate of the benefits which it receives from the UICA admissions program. There is a similar view at College B, which estimates its benefits at $60,500. Each of the five other reporting colleges estimated the benefits to be $91,000 or more - up to $120,000.

The benefits for the seven colleges collectively are estimated at $629,000. This compares with:

- Total fees of $70,000 ($10,000 each) paid by the seven colleges for the program.

- Some administrative costs of cooperation estimated at about 10% of their combined admissions budgets, or $63,600 (10% x $636,730).

The combined cost of the cooperative program is thus $133,600 ($70,000 + $63,600) — between one-fourth and one-fifth of the estimated benefits. Conversely, the estimated benefits were four to five times the costs.

D. Interpretation of Concepts: the Multiplying Effect of Benefits

At none of the colleges is nationwide recruitment emphasized as much as is regional recruitment. If however, the UICA admissions program had not existed in 1977-78, the colleges would all have allocated more funds to admissions than were allocated in 1977-78; at some of them the increase might have been almost as large as the amounts shown on the last line in Table I. This is another way of saying that funds are allocated according to priority schema. At any college, some admissions expenses are essential, and some form of recruitment is usually also held to be essential. The larger the recruitment effort becomes, the less important it is to increase further the recruitment budget. But if a nationwide recruitment program can be obtained for one-fourth of its benefits value, then it is a bargain, and becomes a part of administrative operations that is valued for its contribution in diversifying the student body even though nationwide recruitment does not have as high a priority among the college's objectives as does regional recruitment. Further, with the decline in the college-age population, now beginning, the strengthening of admission programs is held to be necessary at most private colleges, including the UICA colleges.

The estimated benefits (that is, the "replacement costs") do not appear high for any one college when the figures in Table I are examined. Nationwide programs for recruiting freshmen are expensive; they are ordinarily undertaken only by colleges and universities with high admission standards and large endowments, such as the Ivy League and Seven Sisters colleges. If any of the UICA colleges were to undertake independently to administer its own nationwide recruitment effort, it seems unlikely that the costs would be smaller than the $175,000 to $241,000 estimated by six of the seven colleges. (College C, as explained above, would develop a smaller program than the other six in these circumstances.) It is easy to see, for example, that if the UICA program were moved to the Kansas City Art Institute as its own program, the Institute would enjoy the full services of the program at a cost of between 75% and 100% of that program's costs, or between $90,000 and $120,000 in 1977-78.

In initial conversations with the colleges' officers, however, many of them, thinking in accounting terms, would ask how the other eight colleges could enjoy large benefits from the program if they had already been "assigned" benefits of $90,000 or more to any one college. Their initial reaction frequently was that the cooperative program was worth more than the $10,000 fee paid, but not several times as great as $10,000. It would be correct, of course, to say that, if the expenses of the UICA program were allocated among the nine colleges through an accounting process that reflected an equitable sharing of the costs, then the average allocation would be $13,333, or one-ninth of the $120,000 expended by the UICA staff in 1977-78. The nature of a cooperative enterprise, however, is such that the participant is presumed to receive more in value from the enterprise that he has put into it and there is no reason ipso facto to believe that the value received is only slightly greater than its cost to a participating institution. If, for example, a voluntary fire department in a small town prevents a business from total destruction, the benefits received by the owners are many times the costs of participating in the voluntary fire department - and this is true even if the business is well insured against fire. Otherwise, the problems of voluntary cooperation - the frustration, the time consumed, the decline of flexibility in the control over quality and the content of services, the decrease in autonomy (viewed by some persons as a loss of autonomy) - would not be accepted. Participants would withdraw and the program would dissolve. That is not what is happening to consortia programs in general. On the contrary, few of them are being dissolved, while there is a burgeoning of new cooperative programs.

As these concepts were reviewed at the UICA colleges, the initial skepticism was replaced by an understanding of the concepts and agreement that the analysis is sound. How the officers arrived at this conclusion is understood only by an examination of the main elements in the cooperative admissions program.

1. Publications

The cooperative publications program consists of six different publications: a handsome brochure describing briefly each college; a "nine answers" folding brochure that is a "feeler" piece; a career resources list which is a guide to career possibilities in various fields of art; a poster, with tear-off cards, sent to every high school art department in the nation and to high school counselors; another poster distributed to all junior colleges in the nation, which is to interest potential transfer students, and a special edition of the UICA News which carries features on each college's activities. The UICA staff also distributes press releases and places advertisements in newspapers including The New York Times Educational Supplement.

If any of the colleges were to develop a publications program for itself of comparable quality to the UICA's program and were to seek the same national exposure, its costs would be less than the $50,000 UICA publications cost. The UICA brochure would be replaced with a smaller college brochure and some of the other publications would also be smaller. The costs, however, would not drop by eight-ninths. On the contrary, five of the seven responding colleges estimated that the $50,000 in publications costs at UICA would be reduced only $5,000 or $10,000; the other two colleges estimated the drop at about 60% - to about $20,000. The combined replacement costs would be $258,000, over five times the UICA publications costs. The explanation is simple. Cooperation eliminated the duplicative costs of each college contracting separately with designers and printers for its publication program, and the cooperative network distributed 50,000 pieces of literature rather than the 350,000 pieces that the seven colleges would mail without cooperation.

2. College Fairs

The National Association of College Admissions Counselors (NACAC) sponsors a series of day-long fairs in many cities across the nation, the purpose of which is to allow high school students and their parents and counselors to seek out representatives of colleges and universities, establishing contact with institutions. At these fairs, the admissions officers of the UICA colleges have represented all nine colleges. Since the UICA admissions committee has allocated the fairs among the UICA colleges' staffs, with only one representative ordinarily attending a single fair, there has been a multiplying factor of nine in the exposure of the colleges. The UICA admissions committee recently voted to abandon attendance at most of the fairs since Portfolio Days have proved to be more successful.

3. Portfolio Days

Portfolio Days, a creation of the UICA colleges, bring together high school and junior college students interested in the visual arts. Portfolio Days are now planned at national meetings of arts colleges' administrators. The host institution for each Day is responsible for all administrative preparations for that Day, including invitations, publicity, space arrangements, etc. They are more effective than college fairs largely because of the use of the portfolio, and the critiques of students' work are more useful to students interested in the visual arts, as well as their families and counselors; hence, staff time wasted on non-interested "shoppers" is largely eliminated and there is sufficient time for staff to talk with potential students, advising them on the further development of their work and the institution most suitable to their interests and talents. Here, too, the multiplying factor is at work for the UICA colleges at little or no extra cost.

4. Travel For School Recruitment

The UICA admissions officers also share costs for high school and community college contacts. Each admissions counselor following a mutually arranged schedule, represents nine colleges instead of one college as he or she visits students and their parents, teachers, and counselors. Here again, the exposure for any one college is multiplied nine times with only a modest increase in cost - in the opinion of some officers, at no increase in cost.

E. Evaluation of Cost Effectiveness

The colleges' officers are in full agreement that the program is cost effective. When they understood the conceptual framework, they accepted it as valid and supplied estimates needed to calculate the benefits (Parts II and III of Table I).

The program has permitted all the colleges to avoid some cost increase in admissions costs. It also has given them benefits in the form of nation-wide recruitment that they could not possibly afford except through the cooperative program. The combination of the costs avoided and the benefits received in cooperative services that could not otherwise be afforded are estimated, for 1977-78, to have been four to five times the costs of the cooperative program. Stated conversely, the cost of the program was one-fourth to one-fifth of the benefits received from it by the colleges.

In the Golden Age of higher education, cost effectiveness of this magnitude in admissions programs might not have been important to small colleges. As they enter the 1980s, however, it is important. The nine visual arts colleges of the UICA, which are small colleges scattered from Philadelphia to Atlanta to Oakland, have developed a remarkable program that is unique. It gives a model worthy of emulation in other sectors of higher education.

TABLE I
ESTIMATED BENEFITS RECEIVED BY SEVEN MEMBER COLLEGES
COOPERATIVE ADMISSIONS PROGRAM
UNION OF INDEPENDENT COLLEGES OF ART

	College A	College B	College C	College D	College E	College F	College G	Total
I. Cost of Admissions in 1977-78:								
Salaries	34,600	35,600	29,500	43,800	59,000	43,432	55,140	301,072
Travel	5,800	8,300	7,500	10,300	13,200	17,204	5,500	67,804
Office Operations	1,400	12,300	2,500	15,400	19,600	9,142	1,800	61,142
Publications	16,500	46,400	20,000	40,700	33,000	21,000	25,000	202,600
Market Research	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Other	1,800	2,300	-0-	-0-	-0-	112	-0-	4,212
Total	60,100	104,900	59,500	110,200	124,800	89,980	87,440	636,830
Payment to UICA	10,000	10,000	10,000	10,000	10,000	10,000	10,000	70,000
Total Cost	70,100	114,900	69,500	120,200	134,800	99,890	97,440	706,830
II. Estimated Costs of Regional Plus Nation-wide Recruitment Program in the Absence of the UICA Cooperative Program:								
Salaries	69,600	47,600	41,500	80,000	87,000	78,432	70,140	474,272
Travel	25,800	13,800	20,000	37,300	33,200	27,204	25,500	182,804
Office Operations	17,400	15,300	7,500	25,000	29,600	20,142	8,800	123,742
Publications	61,500	86,400	40,000	59,100	78,000	66,000	70,000	461,000
Market Research	14,000	10,000	10,000	14,000	14,000	14,000	14,000	90,000
Other	1,800	2,300	-0-	-0-	-0-	112	-0-	4,212
Total	190,100	175,400	119,000	215,400	241,800	205,890	188,440	1,336,030
III. Benefits from Cooperation (II minus I)	120,000	60,500	49,500	95,200	107,000	106,000	91,000	629,200

Consortium: Hudson-Mohawk Association of Colleges & Universities

Title of Program: Admissions Brochure Mailing to High School Students

Participating Institutions:

- Albany College of Pharmacy
- The College of Saint Rose
- Empire State College
- Hudson Valley Community College
- Junior College of Albany
- Maria College
- Rensselaer Polytechnic Institute
- Russell Sage College
- Schenectady County Community College
- Siena College
- Skidmore College
- State University of New York at Albany
- Union College

Program Administrators:

Mr. Robert M. Briber, Executive Director, and Ms. Virginia S. Bedard, Assistant Director, Hudson-Mohawk Association of Colleges & Universities, in cooperation with the Admissions Officers of each of the participating institutions.

A. PROGRAM

The colleges and universities of Hudson-Mohawk Association share location in the Capital District of New York State, a distinctive urban center of some 750,000 people north of the Boston-Washington megalopolis. They share, too, a growing concern for a diminishing pool of potential freshmen. A marketing effort that emphasizes our geographical advantages to potential students is both needed and an appropriate effort for cooperative action. Our studies indicate that location is third, behind cost and courses of study, as a determinant of college choice by entering freshmen. All member institutions can benefit from promotion of shared location.

Beginning in September 1978, the Association distributed 40,139 copies of an attractive admissions brochure, "Consider These Colleges", to high school students. The brochure included two postcards to be returned to member colleges.

The brochures were distributed several different ways. Distribution and response, in numbers of postcards as a percentage of the number of brochures, were as follows:

Number Distributed		Postcards Returned To Colleges, as %
28,742	New York State high school juniors, from purchased lists of names	3.55%
6,400	High School Guidance Counselors and Two-Year College Transfer Counselors, principally in New York State	0.59%
3,122	Public and other libraries throughout New York State	0.74%
1,875	Various miscellaneous mailing lists; handed out at "College Day"; etc.	0.85%
40,139		2.73%

Responses totalled more than 1,031 names. Twenty-seven percent of the respondents returned two postcards to different campuses.

B. COSTS

1. The program demonstrates cost effectiveness in two ways. It produced the names of some 1,030 potential students for member colleges, at low cost, and it emphasized each campus's location in a broad context that an individual institution could not provide.

2. Counting all expenses, the Association has spent:

Mailing list purchase	$1,050.00
Printing expenses	4,726.10
Mailing expenses	1,199.97
Staff time (est.)	3,000.00
Total	$9,976.07

C. BENEFITS

A recent major Academy for Educational Development study[1] analyzed admissions costs at 21 different independent liberal arts colleges across the country. The study reported that 83 of every 1,000 people who inquired about an institution in 1976-77 actually enrolled. From their figures we can thus conclude that approximately 90 students will actually attend one or another of our colleges from among these requests for information. The study found further that those colleges spent an average of $380 per matriculant in 1976-77 for admissions/recruitment effort. If we assume that the colleges were going to spend that amount this year per matriculated student anyway, and had their salaried personnel and publications in place, this group of additional names added little extra cost. Thus, the cost benefit of these students' names is 90 x $380, or $34,200.

Many of these names would no doubt have been received by the campuses anyway, through normal efforts. Admissions officers, nonetheless, were enthusiastic about the program because it produced these names earlier in the school year than they would have been produced otherwise, and gave the institutions more time to contact students. Finally, we feel that the number of 90 derived from comparing these results to the AED study is conservative.

In addition, the effort emphasized, both to students and to the people in the academic institutions, the advantages of this urban area for college-going purposes.

D. VALIDATION PROCEDURES

The Association plans to contact all student respondents directly, to ascertain whether or not they attend the colleges they contacted. This should validate the number of enrollments and test other elements of this project.

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[1] "Admissions/Recruitment: A Study of Costs and Practices in Independent Higher Education Institution" Academy for Educational Development Inc., Management Division. September, 1978

Consortium: New Hampshire College and University Council

Title of Program: Cooperative Admissions

Participating Institutions:

- Colby-Sawyer College
- Daniel Webster College
- Franklin Pierce College
- Keene State College
- Nathaniel Hawthorne College
- New England College
- New Hampshire College
- Notre Dame College
- Plymouth State College
- Rivier College
- St. Anselm's College
- University of New Hampshire

Administrators:

Mrs. Judy Wilson, Coordinator and
Mr. Henry Munroe, Executive Director, New Hampshire College and University Council

A. Program

The NHCUC and its Admissions Committee publish cooperative admissions brochures, sponsor visits to NHCUC institutions for high school guidance counselors, and organize joint recruiting programs around the country for counselors, parents, high school students, and transfer students.

This program provides a clearinghouse for information concerning areas of study, admission procedures, and financial aid options available at member institutions.

1. Guidance Counselors' Tours

In the Fall, the Admissions Committee sponsors tours for guidance counselors, which in 1977 brought 75 guidance counselors to the campuses. The waiting list for these tours, coupled with feedback from certain counselors indicating that the Spring would be a more convenient time, resulted in the implementation of the first Spring tour, with an additional 39 participants.

The assessment of the effectiveness of these tours to the campuses (each tour of one week duration) indicates that they are important as an information-gathering experience for the counselors. First priority in registration for the tours is offered to New Hampshire counselors.

2. Consortium Mini-Tours

In the Fall, Admissions Officers traveled together to the Shore Area of New Jersey, Northern New Jersey, Westchester County, and Albany, New York.

During the day, they hosted meetings with area guidance personnel. These programs included an introduction to the Consortium, a briefing on the institutions represented, and the distribution of admissions materials. During the evening hours, the counselors met with students and their parents, with separate tables set up for each institution. The names of those students who had received personal invitations were gathered from a variety of sources:

- the Student Search Service mailouts in which students received a Consortium brochure;
- the inquiries received from student reply cards generated by Consortium publications;
- the inquiries received by individual admissions offices.

The program has proved to be a major step forward in achieving recruiting cooperation and in demonstrating the value of "pooling" resources and professional expertise. The perception of counselors, students, and parents is that the New Hampshire institutions have the ability to rise above the all-too-common, cut-throat competitiveness often found in the admissions area. The fact that they sponsor such programs in consort has brought a special respect and credibility to public and private higher education in New Hampshire.

3. New Hampshire Counselors Program

Escalating tuition costs have indicated that today's student may, indeed, opt for a college close to home, thereby economizing on travel and living expenses. Thus, it has been, and now remains, critical for NHCUC to intensify its efforts in "its own backyard" - within the State. Projects designed to accomplish this are of value to both public and private institutions, since financial aid packages, as well as the New Hampshire State Incentive Grant program, often minimize tuition differentials.

In order to reinforce their commitment to New Hampshire counselors and students, programs are hosted in the Spring in the Nashua Area, Seacoast Area, Keene Area, Concord Area, and in the North Country (Littleton).

A total of 99 New Hampshire counselors attended these meetings. Valuable feedback and mutual concerns were expressed, with counselors urging an earlier exposure to higher education for their students, well before the traditional junior/senior year of high school.

4. Publications and Inquiries

The success of the 1977-78 Consortium brochure can be affirmed by the need to reprint 5,000 copies (in addition to the original 25,000) in order to keep up with the demand.

Again this year, the "ideal" student population was identified through the Admissions Testing Program of the College Board. This service enables the counselors, collectively, to identify the characteristics of those students who are most likely to apply and eventually enroll in member institutions. These same student characteristics were used with selected matching criteria for the student search variables.

Out-of-state students were defined in terms of geography, grade point average, SAT scores, and parental contribution. A total of 12,746 brochures were mailed in August 1977.

Within New Hampshire, brochures were sent to every student taking the PSAT, SAT, or NMSQT, for a total of 4,653.

By the Spring of 1979, 15,000 inquiries were processed to member institutions. By this same time in 1978, over 10,000 inquiries had been processed. A 5,000 (50%) increase is a notable increase in response, especially considering that direct mail responses do not usually exceed 3%.

5. Marketing and Research

In a study prepared for the Admissions Committee, the portability status of various states' scholarship and grant programs was analyzed. It was demonstrated that more and more of the primary market states are at least considering a reciprocal arrangement. In New Hampshire, non-portability is firmly entrenched at the present time; thus, mutual portability is excluded. This poses significant problems for acquiring students from across state lines. The institutions and the state, therefore, must help meet the financial requirements imposed on incoming students.

The systematic collection of data and the resulting profile of the composite "ideal" applicant pool have already been mentioned. The NHCUC has tested the validity of this marketing approach by concurrently mailing brochures to a random sampling of students, and comparing the returns with those generated from "target" populations. The results strongly support the targeting approach.

It is clear that one-stop shopping (i.e., information on 12 colleges from one source) is of value to students, parents, and counselors.

A further factor in success in the admissions direction involves the ability to function of the individual institution within a larger consortium setting - the New Hampshire College and University Council. This translates as greater credibility. For example, it seems most attractive to guidance counselors to offer their students the opportunity to use the Student Exchange Program. It is interinstitutional cooperation that permits such options and flexibility which are perceived by guidance counselors as being of great benefit to their students.

B. Costs

The 1978-79 budget of the NHCUC's admission program is as follows:

Printing and Publications	$18,972
Mailings, Shipping, Labels and Supplies	2,805
Booth Rental, Mailing and Workshops	1,635
Travel	3,940
Administration	12,650
Counselor Tours	10,000
	$50,000

All these funds were acquired from the ederal government, with the exception of the Counselor Tours. This item is divided among the member institutions - approximately $750 each.

C. Benefits

Inquiries rose from 5,000 in 1976-77, to over 10,000 in 1977-78, to 15,000 in 1978-79.

Table I indicates the number of inquiries, applicants, and registrations received by eight of the member colleges for the Fall of 1977-78. (No data are shown for the remaining four colleges since they did not submit a report that year.)

Table I
Consortium - Generated
Entering Freshmen, 1977

Institution	Inquiries	Applications	Registrations	Tuition Generated Income Generated by Enrollment of students through Consortium Initiative (In-State est.)
A	957	86	45	46,575
B	579	59	31	29,295
C	338	30	4	13,600
D	141	37	7	23,891
E	604	19	8	30,600
F	284	6	3	6,210
G	361	62	19	63,156
H	962	207	41	51,270
Eight Institution Total	4226	506	158	264,597

Table I indicates that 158 students registered at eight of the twelve member colleges. That number is projected to include registrants at the other four private colleges. An added 8.2 students per college would increase the registrant population for the Consortium effort to 191 students.

It is likely, of course, that some students registered at one of the schools after applying directly to it, not using the Consortium channel. The figure on such direct applicants and registrants is not traceable. It may be assumed, therefore, that an even greater number of students responded to Consortium-generated initiatives.

Further, it should be noted that not all admissions costs are increased at the Consortium. The final processing of all applicants through registration, of course, is done on the campus. Such costs are minimal, however, because the larger expenditures in admissions work are the up-front costs for applicant generation.

Nevertheless, the figures stated above indicate that the per registrant costs for the NHCUC's admissions effort is \$262 (50,000 ÷ 191 = \$262).

From an Academy for Educational Development's study (1978) of admissions costs, it is projected that institutional costs, as per the national average, are \$445 per registrant for the 1979 entering freshman class.

A cost avoidance of \$183 per registrant (\$445 - 262 = \$183) is, therefore, valued by the member institutions of the NHCUC in their work together through the Consortium.

The actual costs avoided, based on these estimates, (191 registrants x \$183 cost avoided each) was \$34,953. They avoided an amount equal to 70% of the amount actually spent, \$50,000.

Finally, the income generated by the enrollment of students through Consortium initiatives will be cause for reflection by the leadership of a number of the institutions. Certainly, students choose an institution because of all its offerings, not solely or even primarily, because of the work of admissions staff. Nevertheless, without that admissions contact and subsequent cultivation, the student would not have that institution as a choice and no income would be realized. However complex the factors for choice, the result is tuition and fee income at a level here ranging from \$63,156 down to \$6,510. This exceeds by a very great amount the investment of each institution in consortium-wide admissions work.

D. Concluding Observations

There are numerous ways to analyze benefits in a joint admissions program. Certainly, exposure of the institution to a broadening clientele is primary. However, all the other mutually supportive efforts to this exposure are crucial to its success:

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1. More efficient use of travel funds;
2. Development of the critical mass sufficient to focus the attention of important clientele, whether in tours coming in or going out;
3. Acquisition and use of search lists;
4. Production and distribution of publications;
5. Development of a substantial effort in market research;
6. Planning;
7. Staff support necessary to focus the attention of the participating directors and to organize their collective effort.

All of these and others can, and in New Hampshire do, advance recruitments and enrollment.

The costs per inquiry, per applicant, and per enrollment need to be compared among the institutions and for the Consortium admissions effort as a means of further evaluating cost effectiveness internal to New Hampshire. These data are not included here because they are not available. No doubt as the NHCUC admissions effort becomes computerized, such harder data will be generated.

Consortium: Graduate Theological Union

Title of Program: Common Registrar's Office

Participating Institutions:

American Baptist Seminary of the West
Church Divinity School of the Pacific
Dominican School of Philosophy and Theology
Franciscan School of Theology
Jesuit School of Theology at Berkeley
Pacific Lutheran Theological Seminary
Pacific School of Religion
San Francisco Theological Seminary
Starr King School for the Ministry
Graduate Theological Union

Centers and Schools of the Consortium:

The Center for Urban-Black Studies
The Center for Judaic Studies
The Center for Women and Religion
The School of Applied Theology
The Center for Ethics and Social Policy

Affiliated Institutions and Programs:

The Berkeley Priory and the Institute for Thomistic and Ecumenical Studies
The Center for Hermeneutical Studies (in Hellenistic and Modern Culture)
Program for the Study of New Religious Movements in America
Pacific and Asian American Center for Theology and Strategies

Program Administrators: Mrs. Elizabeth Over, Registrar, and Dr. Claude Welch, President and Dean, Graduate Theological Union.

A. Background

The Graduate Theological Union (GTU) in Berkeley, California, was founded in 1962 and is both a graduate institution granting the MA, Ph.D., and Th.D. degrees and a consortium of 10 theological schools preparing men and women for professional ministries in the religious communities and society. As an ecumenically inclusive theological center, the GTU is composed of six protestant and three Roman Catholic seminaries which, along with the Center for Judaic Studies, represent the major strands of western religious tradition. These institutions serve a community of 1,100 resident students.

The GTU provides full access to the course offerings of all its consortium institutions. The value of this resource is attested to by the fact that, on the average, students choose to receive over one-third of their academic instruction at schools other than the one in which they are enrolled. Such curricular interreliance is in itself a major curricular resource and reflects economic capacity for each of the member schools far beyond (at least 33%) their current level of expenditure. The schools, together with their joint study centers, constitute an interreliant network on a level and at a quality that can be of interest to small and medium-sized colleges and universities throughout the nation. Joint academic programs and cross-registration systems are discussed elsewhere in this report and, therefore, need not be treated here.

The centers and schools of the consortium also provide educational offerings, resources for the curriculum, and public events in support of study by members of the community of scholars and students.

With the keen sense of community, as well as the close proximity of its constituent schools and its shared resources, the GTU also affords unending possibilities for unstructured discussion among members of the several faculties, among students, and between students and faculty members. This easy exchange of ideas in personal contact makes possible thorough exchanges among members of diverse religious communities. These relationships and their emergent interreliance have led to the discovery that the factors which bind people of different religious persuasions together are more important than those which separate them. Through sharing of each other's cherished traditions and learning from their wisdom with openness to each other and the world, members in the GTU seek to foster a growing ecumenical and intellectual community.

B. Services Provided by the GTU Common Registrar's Office

As a service to member institutions, GTU regularly:

- Prepares annual course schedule and addendum for each quarter.

- Provides all registration materials: schedules, study program cards, add/drop forms.

- Builds data base in computer for students and keeps data base current.

- Processes all registration, including adds/drops.

- Provides class lists for faculty: one set after initial registration each quarter and one set after add/drop each quarter.

- Provides computer printouts of study program for students: one set after initial registration each quarter and one set after add/drop each quarter.

- Provides grade report lists.

- Processes all grades.

- Provides grade reports for students each quarter.

- Records final deposition of all graduated and withdrawn students.

- Provides hard copy transcripts for graduated and withdrawn students for permanent retention at appropriate school.

- Fills transcript requests.

- Processes all statistical surveys (ATS, HEGIS and others), with copies of schools.

- Provides data: FTE, Cross Registration Statistics, Grade Distribution, Faculty Teaching Load, etc.

- Provides statistical meterial within the capability of the computer programs. (Only the trained personnel of the Common Registrars Office have access to the registration and transcript program.)

- Processes VA Certifications: including a regular and constant check of veterans' attendance and progress in classes.

- Manages University of California, Berkeley and Mills College cross-registration.

- Conducts Summer registrations for students regularly enrolled in degree or certificate programs.

- Conducts Summer Session registrations for selected schools.

- Provides professional counsel and assistance to Registrars and other administrators, including information on governmental entities (HEW, VA, Bureau of Schools, Sacramento, Title IX, Rehab Act 1973).

- Answers queries and resolves scheduling, registration, and transcript problems for students, faculty, and staff.

C. Economic Data and Analysis

During the three-year period from 1976-77 to 1978-79, registration of students increased from 677 to 1,478, an increase of 801 students. The percentage of growth in that three years, therefore, was 118%.

The budget for the common registrars office increased from $50,943 to $52,597 for the same period or an increase of only 4% in operating budget.

The basic per unit cost, on the basis of which charges are allocated to the participating entities, has decreased from $54.54 in 1976-77 to $38.05 in 1977-78 to $31.69 in 1978-79.

The total cumulative expenditure for all registrars' functions for the year 1977-78 was $113,286.

The annual cost of registrar services today, if each member school operated its own registrars office, would be $198,500.

The net economic gain to the member colleges is $85,214 ($198,500 - 113,286 = $85,214). If the individual colleges were to replace the Common Registrars office and again provide their own services individually, they would face an increased per institution cost of 75.22% over expenditures made during the year of record.

Another way to view this example of cost effectiveness is to note that: the costs for the Common Registrars Office to the member schools is $48,436. The cost they have avoided by doing together what they would have had to do alone is $36,778 ($85,214 - 48,436 = 36,778). These schools together have thus avoided costs at a level three fourths (76%) as great as current expenditures.

D. Concluding Observations

A number of factors combine to allow this economic gain by the member schools of the Graduate Theological Union.

1. Considering the systems and procedures which are standard with any thorough-going registrar's office, it is possible to detail and objectify the functions to be performed in concert.

2. There is a clear and appropriate understanding of the GTU's role by the Board of Trustees and an effective functioning of the Board.

3. There is a clear and realistic image of what the GTU ought to be as a consortium, as a graduate school, as a service center, and as an ecumenical community.

4. There is a deep concern for the integrity and interest of the constituencies affected, matched by access to GTU's structures and processes by these constituencies.

5. There is mutual respect and trust among the heads of the institutions.

6. The common services provided, including the Common Registrar's Office, serve to facilitate and support other activities of the consortium of

institutions and, therefore, the functions of these services are reinforcing to the broad interests of the community of institutions.

The presence of vision on the part of the leadership of the GTU and its member schools, together with a developed series of insights into the mechanisms by which interdependencies mature, has resulted both in increased services with a growing capacity for professionality in registrar services and in major economic gain to all of the schools involved in the Graduate Theological Union.

Consortium: New Hampshire College and University Council

Title of Program: Programs to Increase Financial Aid

Through these programs, efforts are made to improve the New Hampshire Incentive Grant Program, develop an incentive for New Hampshire banks to participate in the Federal Government Insured Loan Program, heighten student use of the Basic Educational Opportunity Grants, and increase the pool of Government Insured Loans available to New Hampshire students.

Participating Institutions:

With one exception, all four-year colleges and universities, public and private, in the state of New Hampshire belong to the New Hampshire College and University Council. All twelve member institutions in NHCUC participate in these programs.

- Colby-Sawyer College
- Daniel Webster College
- Franklin Pierce College
- Keene State College
- Nathaniel Hawthorne College
- New England College
- New Hampshire College
- Notre Dame College
- Plymouth State College
- Rivier College
- St. Anselm's College
- University of New Hampshire

Administrators:

Mr. Henry Munroe, Executive Director, Mr. Tyson A. Miller, Deputy Director and Mr. Eric Brown, Coordinator and Interinstitutional Planner, New Hampshire College and University Council, cooperating with the Directors of Financial Aid of the twelve participating institutions.

A. Purposes of the Program

The State of New Hampshire Postsecondary Education Commission and the NHCUC are mutually committed to the goal of insuring that any student with desire and ability can pursue his or her postsecondary education at a time which is convenient and at a price which is affordable. The purposes of the programs reviewed here are to insure that all legitimate financial needs of New Hampshire students can be met from public and/or private sources for total postsecondary expenses.

B. The Programs

In the mid-1970s, the NHCUC staff, under contract from the New Hampshire Postsecondary Education Commission, developed a statewide postsecondary education management information system. Part of the system was designed to provide information on enrollment, and another part to provide information concerning federal, state,and institutional financial aid to students. Using the data in the system, the NHCUC staff undertook study of vexing issues of enrollment trends and financial aid.

For purposes of projecting enrollment from 1976 to the 1990s, assumptions were made on migration patterns in New England and the Mid-Atlantic states, which supply some 95% of the NHCUC institutions' students, and on the percent of high school graduates who enter college. The resulting projections showed that the college-going population in the colleges and universities of New Hampshire would drop 21% by 1985 and 32% by 1991. The NHCUC institutions are essentially enrollment driven and a drop of almost $25 million in revenues from tuition, room and board between 1976 and 1991 was projected.

Related to these issues was the concern that the percent of high school graduates enrolling in colleges and universities in neighboring states to the south (Massachusetts, Rhode Island, and several Middle-Atlantic states) was higher than in New Hampshire. Research was undertaken to pin-point critical variables that might be the cause of this loss of potential students to higher education in the state.

A basic tool in the market analysis was a state-wide profile of applicants which was developed from data compiled by the College Scholarship Service from questionnaires given to students taking the Scholarship Aptitude Test or Achievement Tests.

The primary findings were that the vast majority of the potential NHCUC applicant pool was in the lower income group; yet, the fewest applicants came from these groups. The data focused on the critical need to enlarge the pool of financial aid available and to improve the flow of information on financial aid programs to potential students and their families and counselors. Programs would have to be designed to enlarge the financial aid pool, to inform students, their families and counselors of the opportunities for aid, and to encourage and assist them in making application. More financial aid was seen as the critical entry point to get at the gap in admissions from the lower income groups. The presumption was that measuring the financial aid opportunities would help to counter the projected enrollment decline.

The staff then examined possible approaches toward increasing financial aid. A package was designed which would require legislation. It would aim to raise the applications from students in lower income groups, and from the middle-income groups who were also under-represented in the applicant pool. The concept of self-help, a traditional value in New England that has remained strong in New Hampshire, was a primary consideration in the design of the program. The proposed legislation called for an incentive program, with two main components: the establishment of State-funded scholarships to match federal financial aid funds, and the creation of a subsidy to banks aimed at increasing the volume of bank loans to students borrowing under the Federal Government Insured Loan Program. The legislation was written by the NHCUC staff and financial aid officers. Through a team effort of NHCUC presidents and staff, the Postsecondary Education Commission and its staff and representatives from banks and the community, it was passed by the legislature.

The New Hampshire Incentive Grant Program was established by this law, providing scholarship funds for New Hampshire residents who are undergraduate students attending any post-high school institution in the State. Grants ranging from $100 to $1,500 are made to only full-time students, and require maintenance of a satisfactory academic record. The amount awarded to a student is based on need. This was a new program in New Hampshire, and the total awards made under the program have been:

1976-77	$269,370
1977-78	$371,894
1978-79	$441.482
1979-80	$500,000 (est.)

To promote the concept of self-help, the Incentive Grant Program contained provisions for encouraging New Hampshire lenders to participate in the Guaranteed Student Loan Program of the federal government. The encouragement is given through monetary awards which amount to 5% of that part of a New Hampshire lender's Guaranteed Student Loan portfolio which represents an increase over and above the lender's past three-year average of Guaranteed Student Loans outstanding.

In developing the proposed legislation, the NHCUC and the Postsecondary Education Commission had been convinced that the Guaranteed Student Loan Plan held great potential for enabling New Hampshire residents to obtain the resources needed to finance a postsecondary education. Lending institutions represented the single most influential component of the Guaranteed Student Loan Plan and had the final authority over the financial resources that are the life blood of the program. The majority of the lending institution managers would like to support programs that help meet the needs of the community they serve. However, their ultimate responsibility was to protect the resources of their customers and investors by obtaining the greatest return on investment possible, at a reasonable risk. Consequently, return on investment and risk were ranked above service value to the community in determining the acceptability of a new investment.

The major factor that had limited the potential of the Guaranteed Student Loan Plan in New Hampshire was that many bankers viewed the Guaranteed Student Loans as a poor choice when compared with other investment alternatives in terms of return on investment and risk. Indeed, the high community service value of the program was probably the major factor influencing bankers to participate at all. Problems in the operation of the program included:

- Not all New Hampshire banks participated;
- Limits were set by individual banks on total GSLP loans outstanding for a given year;
- Most applicants who were applying as freshman students were rejected, simply because of their freshman status;
- In many cases, students did not receive sufficient loan funds to meet their entire need, or even the maximum amount allowed under the GSLP guidelines;
- Non-resident students were ineligible to receive Guaranteed Student Loans from New Hampshire lenders.

Under new legislation, which became effective in September, 1976, bank participation has soared. The total for new loans completed has been:

Calendar Year	Amount of Loans Completed	Increase Over 1975
1976	$ 3,417,742	$ 301,028
1977	5,251,858	2,135,144
1978	6,981,935	3,865,221
1979	10,000,000	6.9 million (est.)

These increases are attributable, in large measure to the new incentive for banks to issue loans, to mailings to students and parents to market the concept of loans to give them information about the opportunities, and to encourage that the opportunities be used. In 1979, however, an additional factor is involved in the unusually sharp rise in new loans. This, too, is due to the work of the NHCUC in cooperation with the Postsecondary Education Commission and the New Hampshire Higher Education Assistance Foundation, the private, non-profit foundation which serves as the State guaranteeing agency.

Attached to this case study is a document used to show lending institutions how they can leverage the return on a Guaranteed Student Loan portfolio without drawing on any additional institutional funds, through the use of multiple installment loans, loan warehousing, and loan sales. The staff held regional meetings with bank officers to explain the possible techniques, which involve a sophisticated knowledge of banking practices and the Guaranteed Student Loan Program. The staff also worked with the State's Student Loan Marketing Assistance Corporation to facilitate the warehousing and selling of loans.

Finally, the NHCUC sent letters to parents of all high school seniors outlining the opportunities in the Government Insured Loans.

The results of this second phase of efforts to increase loans are being seen in 1979. The NHCUC expects that the amount of new loans completed will rise from $7 million in 1978 (calendar year) to $10 million in 1979, and it attributes at least one-half of the $3 million increase to the recent work with bankers and to marketing aimed at parents to sell the concept of loans as self-help in supporting their children's education.

Once the activities to strengthen loan possibilities were well underway in 1977, the NHCUC turned its attention to the only other major source of financial aid available - federal programs. Of the various federal programs of financial aid, only the Basic Educational Opportunity Grant program (BEOG) offered the possibility of a large increase in federal support to New Hampshire students. BEOG data in the statewide postsecondary management information system brought to light several disturbing facts. Compared to adjoining northern New England states, students who were New Hampshire residents were receiving the smallest proportion of BEOG financial aid: between 42% and 45% of students from Massachusetts, Maine and Vermont received BEOG awards, compared to 32% of New Hampshire students. The percentage of BEOG participation, by nature of the federal statute, is a function of parental income levels. If New Hampshire applicants had a significantly higher income level than applicants from adjointing states, the percent receiving awards would be lower for New Hampshire. Further research by the staff, however, demonstrated that this was not so. The conclusion was drawn that New Hampshire's comparatively low BEOG recipient percentage was, in fact, a result of a low application rate. It was evident that New Hampshire residents were not taking full advantage of the Basic Educational Opportunity Grant program. A large amount of federal aid to New Hampshire students was being lost through the simple lack of an application. The data in the information system showed that about 2,400 high school seniors would have been eligible for BEOG grants if they had applied. If all of them had applied and had received BEOG awards at the national average of awards for 1976-77, which was $797, New Hampshire students would have received an additional $1,681,000 of BEOG funds.

The NHCUC believed that a program was needed that would make potential applicants aware of their opportunities for BEOG support, and the staff proposed a program to the State's Commissioner of Education which would give information on BEOG's to students and potential students and would urge them to apply for BEOG support. They further proposed that a financial aid workbook be developed and sent to high school guidance counselors. All programs of financial aid insure that all high school seniors were aware of the different sources of funds for a college education and knew how to apply for the various grants and loans. The result was an understanding that led several groups to join in a mutual program of disseminating BEOG information, including the Department of Education, the Postsecondary Education Commission, financial aid officers, guidance counselors, and the NHCUC. Cooperatively, they undertook the following steps:

1. Two direct mailings of financial aid information and BEOG applications were made to the families of nearly 5,000 college-bound New Hampshire high school seniors.

2. BEOG training materials were included as a part of the recently published New Hampshire Guidance Counselor's Almanac. Training sessions were held for secondary school personnel to acquaint them with the Almanac - a readily accessible index to all financial aid resources available to New Hampshire students. The workshops gave special emphasis to how various financial aid resources could be combined to enable a student to meet the costs of postsecondary education.

3. The New Hampshire Postsecondary Education Commission required the submission of a BEOG application as a condition for application to the New Hampshire Incentive Grant Program.

4. A series of BEOG workshops were held in 1977 to increase understanding of this program.

Later, to assess the success of these efforts, an analysis of the BEOG application rate was made. This study established a benchmark against which the success of the cooperative efforts could be measured. Two major conclusions were drawn in the analysis. First, the program had influenced the time at which students filed their applications. Many more students had filed earlier in the year.

Second, the program had succeeded in significantly increasing the rate of applications. There were 1.3% more high school seniors in 1978 than in 1977, but there was a 7.8% increase in applications for BEOG's. It was estimated that, in 1978-79, 116 students received BEOG financial assistance because of this cooperative effort. The amount of BEOG dollars that these 116 students received can be estimated by multiplying the number of students times the average BEOG award made to students attending New Hampshire institutions (116 x $883.52 = $102,488.32). As the BEOG award is a four-year entitlement, this represents over $400,000 which will be available to these students during their postsecondary education if they remain enrolled that long and if there is no change in their financial aid needs.

C. Costs

The NHCUC staff has estimated the costs to its own budget in developing and establishing the four programs reviewed above, as follows:

New Hampshire Incentive Grant Program	$10,000
New Hampshire incentive to banks to participate in Government Insured Loan Program	10,000
Program to increase Basic Educational Opportunity Grant participation rate	5,000
Program to increase the pool of government insured loans available to N.H. students	2,500
Total	$27,500

These are one-time outlays not recurring expenses. Some of them were incurred in 1977 and others in 1978. The costs to the NHCUC staff of continuing to operate the programs are absorbed in the regular budget and are not large enough to be estimated. In addition, the costs of administering financial aid at the member institutions grow as the size of financial aid programs grow. Those costs have not been estimated but are probably only a small part of the budgets for financial aid offices.

D. Evaluation of Costs and Benefits

Of all the cooperative programs evaluated by CIL teams during the course of the CIL study, NHCUC programs to increase financial aid have the best data base to support an analysis showing unusually high benefits at small costs. The other programs showing high benefits at small cost (in many cases at no known cost) are in cross-registration, where the measurement of both costs and benefits in dollar terms cannot rest firmly on accounting records but must be estimated with the use of an innovative methodology that involves judgment.

The following table summarizes the costs and benefits of the programs reviewed in this case study. Apart from estimates for the year 1979-80 (which includes one-half of calendar year 1979), the figures are firm. For a small expenditure of NHCUC time and $27,500, a long-term stream of grants and new loan funds has been generated, soaring to an astonishing total of $4,409,191 for the most recent twelve months in which actual data are available. Even more astonishing, $7.6 million have been generated during the twelve months underway at the time this report was written (July 1979). The credit for this unique, creative, and successful program is shared by NHCUC with the New Hampshire Postsecondary Commission and the New Hampshire Commissioner of Education, and the New Hampshire Higher Education Assistance Foundation.

Summary Statement
Programs to Increase Financial Aid
New Hampshire College and University Council

	NHCUC Program Costs	N.H. Incentive Grants	Increase in Loans Over 1975	Increase in BEOG's Over 77-78	Annual Benefits
One-time Outlays	$27,500				
Calendar 1976			$ 301,028		
1976-77		$269,370			$ 570,398
Calendar 1977			2,135,144		
1977-78		371,894			2,507,038
Calendar 1978			3,865,221		
1978-79		441,482		$102,488	4,409,191
Calendar 1979			6.9 million*		
1979-80		500,000*		200,000*	7.6 million*

*Estimated amounts for calendar year 1979 and fiscal year 1979-80.

THREE EXAMPLES OF GUARANTEED STUDENT LOAN PORTFOLIO MANAGEMENT

Prepared for:

The New Hampshire Higher Education Assistance
Foundation Guaranteed Student Loan Conference

April 27, 1979

Ramada Inn
Concord, N.H.

Prepared by:

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INTRODUCTION

The following three examples are intended to illustrate the rate of return a lending institution might expect to realize over the next academic year lending period given the following level of effort:

EXAMPLE 1 -- Funding the GSL portfolio entirely with bank funds and merely collecting the interest; what the majority of New Hampshire banks are doing now.

EXAMPLE 2 -- Utilizing the services of the Student Loan Marketing Association to obtain liquidity, maximize equity investment leverage, and eliminate repayment collection costs.

EXAMPLE 3 -- Going all out by leveraging bank funds to the maximum with Sallie Mae borrowings (4 to 1) and taking full advantage of a new provision in the law (interest on multiple installment loans) to collect double interest during the first 4 months of the loan.

A 12% RETURN ON A STANDARD GSL PORTFOLIO

Bank's Gross Yield = 7% + Special Allowance.

Special Allowance = T-Bill (90-Day Bond Equivalent Yield) -3½%.

If T-Bill = 9.75%, then:

Gross Yield = 7% + 9.75% -3.5% = 13.25%.

However, by law, the quarterly interest subsidy plus special allowance cannot average in excess of 12% over any previous 12-month period.

Therefore, given the current T-Bill rate, Bank's Gross Yield = 12%.

Example:

$100,000 in new GSL notes for the fall semester would return $12,000.

Gross Yield on Bank's $100,000 Equity = 12%.

A 17% RETURN ON A GSL PORTFOLIO

BY UTILIZING LOAN WAREHOUSING AND SALES

I. Warehouse advances (loans) to banks must be collateralized by Guaranteed Student Loans in an amount equal to at least 125% of the advance.

II. The advance must be reinvested in new student loans.

III. Bank's cost = T-Bill + 1%

EXAMPLE

1. Assume a bank does not want to invest more than $100,000 of its own funds in new student loans.

2. Assume the bank has $500,000 in old GSL notes and uses those notes to borrow $400,000 from Sallie Mae.

3. Assume the bank uses the $400,000 borrowed plus $100,000 of its own funds to write $500,000 in new student loans.

4. At this point, the bank has a total GSL portfolio of $1,000,000. The source of funds was $400,000 from Sallie Mae and $600,000 of its own funds invested in old and new notes. The collateral requirement to cover the borrowing is only $500,000 (125% x $400,000). The bank may choose to sell up to $500,000 in GSL notes to Sallie Mae and thereby obtain liquidity, maximize investment leverage, and eliminate collection costs when notes enter repayment.

5. Total portfolio now equals $500,000
Bank's equity = $100,000
Sallie Mae advance = 400,000

6. As in previous example, assume:
T-Bill = 9.75%
Bank's Gross Yield = 12% cap

7. Bank's cost = T-Bill + 1% = 10.75%

8. Bank's spread = 12% -10.75% = 1.25% (see note)

9. Yield on borrowed portion: 1.25% x $400M = $ 5,000
Yield on equity portion: 12% x 100M = 12,000
Total return $17,000

10. Gross Yield on Equity = $17M ÷ $100M = 17%

Note: The spread on borrowed portion would normally be 2.5% if T-Bill had not pushed the GSL return rate to the 12% cap. If T-Bill drops to 8.5%, the total return in this example would rise to 22%.

A 30% RETURN ON A GSL PORTFOLIO BY USING WAREHOUSING, SALES, AND THE MULTIPLE INSTALLMENT BENEFIT

THE MULTIPLE INSTALLMENT BENEFIT

The final GSL Program Regulations (to be published May 31, 1979) include a provision which allows that a bank which enters into a binding commitment with a student to make a loan covering a period of up to 12 months, may be paid interest (as well as the special allowance) on the entire approved loan amount even though only a portion of it is actually disbursed.

EXAMPLE

1. Assume that a bank signs binding commitments (promisory notes) with students amounting to $500,000 in loans covering the entire academic year. The cash will be disbursed to the colleges in two equal $250,000 installments on September 1 and January 1.

2. Assume that the bank uses the procedure outlined in the previous example to fund each $250,000 disbursement by providing $50,000 of its own funds and borrowing $200,000 from Sallie Mae.

3. As in previous example, assume:
   T-Bill = 9.75%
   Bank's Gross Yield = 12% cap
   Bank's cost = T-Bill + 1% = 10.75%

4. The return on the bank's GSL portfolio for the 4-month period between the 1st and 2nd installment would be:
   Yield on loans obligated--$500M x 12% x 1/3 yr. = $20,000
   (not cash disbursed)
   Less bank's cost--$200M x 10.75% x 1/3 yr. = -7,167
   4-Month return $12,833

5. The return for the remaining 8 months would be:
   Yield on loans obligated--$500M x 12% x 2/3 yr. = $40,000
   (now fully disbursed)
   Less bank's cost--$400M x 10.75% x 2/3 yr. = -28,667
   8-Month return $11,333

   Total 12-Month return $24,166

6. The bank's equity in the $500,000 portfolio averaged $83,333 over the 12-month period. ($50M for 4 mos. and $100M for 8 mos.)

7. Gross yield on equity = $24,166 ÷ $83,333 = 30%.

CAVEATES

The above example assumes that:

A. The U.S. Office of Education is prepared to handle interest payments on multiple installment loans by September 1, 1979.

B. Sallie Mae is prepared to accept multiple installment loans as collateral (in an amount equal to the actual cash disbursed) by September 1, 1979.

C. The bank's lending officer carefully coordinates efforts with Sallie Mae to fully leverage bank equity at a 4 to 1 ratio of borrowing to equity. In cases where a bank has only a very small portfolio of old GSL notes to collateralize, a rather complicated process of establishing a line of credit with Sallie Mae and making a series of "multiple takedowns" must be accomplished before a 4 to 1 ratio of borrowed funds to bank equity can be approached.

Consortium: Atlanta University Center

Title of Program: Career Planning and Placement Services

Participating Institutions:

- Atlanta University
- Clark College
- Interdenominational Theological Center
- Morehouse College
- Morris Brown College
- Spelman College

Administrators:

Mr. George Land, Coordinator and
Dr. Charles W. Merideth, Chancellor, Atlanta University Center

A. Background

Fifty years ago, in 1929, a contract of affiliation was signed by Atlanta University, Morehouse College, and Spelman College, founding the Atlanta University Center (AUC). Today, it can be said again, as it was in 1946 by the General Education Board, forerunner to the Rockefeller Foundation, "there are few, if any, groups of higher educational institutions in this country which have gone as far as these institutions in voluntary cooperation." Over 8,000 students and more than 500 faculty members are reaping the benefits of this cooperation. Not only is there extensive cooperation in the use of faculty and other academic resources, there is also a wide and growing range of student services, faculty cooperation in research, and administrative cooperation that are operated jointly by the Center's staff of 100 employees and through a network of intercampus relationships that have evolved over the past half century.

Of the six member institutions of the Atlanta University Center, four are predominantly liberal arts colleges offering no graduate courses and two offer only graduate programs. Thirty-six bachelor degree programs are offered by the AUC institutions. In addition, graduate institutions offer major emphasis in 29 major areas at the masters level and 4 majors at the doctoral level.

One of the more than twenty cooperative programs of the Atlanta University Center is the Career Planning and Placement Services. Clearly, it is a strong example of the potential for cooperation inherent in college and university career planning and placement services. The extent to which career advancement work has been developed at the Center is, indeed, a model which deserves the careful attention of colleges and universities whose intent it is to advance the professional career interests of their students and alumni.

1. Atlanta University Center Planning and Placement Service (CPPS)

The AUC Career Planning and Placement Service is a joint venture serving all students of the member institutions. It is a focal point for on-campus recruitment and the coordinating agency for career development activities.

The career advancement service is staffed by a Coordinator who, together with an administrative assistant and a secretary, is responsible for the overall direction and activity of the service. In addition, each institution except the Theological Center, has its own part-time or full-time staff coordinator in career counseling and placement, and their individual efforts are integrated into those of the AUC. The CPPS programs are cooperatively planned and administered. The central service provides the focus for career planning and placement activities for the entire complex. The AUC's placement service:

- Provides information and counsel to all students of the six institutions, aiding them in planning and choosing appropriate and productive careers;

- Provides programs and activities which allow students to explore career fields and opportunities in various employment sectors, and opportunities for advanced study at graduate and professional schools;

- Arranges on-campus recruitment for permanent employment involving representatives from business and industry, government, educational systems, and other non-profit institutions, as well as recruitment by graduate and professional schools seeking students for advanced study;

- Provides information and assistance to students seeking part-time and summer internships or special summer study programs.

The Career Planning and Placement Service is a year-round operation. Most campus interviews occur between October and April, but some placement activity is also offered in the summer school, largely on a referral basis.

The career planning and placement activities are varied and diverse. Some are held on a Center-wide basis and some on the individual campuses. The programs and special events, of course, are open to all students and all are encouraged to participate actively.

2. On-Campus Recruitment

The primary service offered by the CPPS central staff is recruitment by potential employers. Annually, approximately 500 organizations from business and industry, government, education, and non-profit agencies visit CPPS in search of graduates. The identification and cultivation of employers and advanced study options result in greatly expanded job and graduate/professional school opportunities for students and is the major achievement of the CPPS. Students register with the office, establish a placement file and prepare for interviews, all in a sequence designed to facilitate a greater student awareness of the job search process and the means by which the search can be successful. The extent of this function in the CPPS is shown below.

Table 1
Number of Recruiting Organizations by Sectors
1977-78

Sector	# Organizations	# Visits	# Schedules
Business & Industry	314	437	641
Graduate/Professional Schools	132	135	140
School Systems/Community Colleges	53	53	55
Government/Military	19	21	26
TOTAL	518	646	862

It should be noted that employer contacts may be somewhat increased by the fact that growing numbers of employers are seeking qualified blacks. The AUC institutions, of course, constitute a major source of highly qualified blacks at both baccalaureate and advanced degree levels.

3. Special Career Development Programs

Career Planning and Placement Services in the AUC respect the commonality of interests and needs among the campuses of the member institutions. The CPPS, therefore, sponsors a series of center-wide career development programs annually for both graduating and upper-class students. Table 2 reflects the extent of student contact generated in this career awareness and recruiting series.

Certainly, such extensive participation by students with representatives from a broad range of career options requires the participation of numerous organizations. The extent of the participation is reflected below.

Table 3
Number of Representatives by Source

Business/Industry	76
Graduate/Professional Schools	89
Government Agencies	23
School Systems/Community Colleges	43
Total	231

A composite of contacts made by the CPPS with students in both career development conferences and individual job interviews is reflected below.

Table 4
Composite Student Contacts
1977-78

	Individual Interviews		Other		Total	
Atlanta U.	1962	40.6%	784	7.4%	2746	17.8%
Clark	806	16.7%	3074	28.9%	3880	25.0%
Morehouse	993	20.5%	2996	28.2%	3989	25.8%
Morris Brown	454	9.4%	1790	16.8%	2244	14.5%
Spelman	588	12.1%	1963	18.5%	2551	16.5%
ITC/Other	32	0.7%	20	0.2%	52	0.4%
Total	4835	100%	10,627	100%	15,462	100%

It should be noted that over 15,000 student contacts were made with employers or graduate school representatives. Over 500 different organizations or establishments were represented. This extensive effort requires careful and thorough planning. There are comprehensive systems and a sound organization for this endeavor. A set of goals and objectives has been defined, with both the means for achievement and the necessary time frames. Such thoroughness is found only in well developed, highly professional placement services. It is seldom found in institutions with limited economic

Table 2
Number of students participating in Career Awareness and Career Awareness/Recruiting Conferences

	Business/Industry		Graduate/Professional School		Government		Teachers Fair	
	Students	Contacts	Students	Contacts	Students	Contacts	Students	Contacts
Atlanta U	76	380	45	225	19	95	17	80
Clark	218	1090	94	470	280	1400	19+*1	100
Morehouse	347	1735	201	1005	43	215	3	15
Morris Brown	104	520	74	370	37	185	64+*76	700
Spelman	125	625	211	1055	31	155	19	95
ITC/Other	0	0	0	0	0	0	4	20
Total	870	4350	625	3125	410	2050	126+*77	1000

resources, small enrollments or a massive, traditional operation. It is, therefore, to their credit that the Atlanta University Center institutions have exercised both insight and vision in the development of their Career Planning and Placement Services. They have avoided the problems inherent in smallness and limited funds that would constrict severely the career planning and placement services, if they were administered individually by these small institutions.

It is indeed true that AUC students have the best of two worlds when it comes to career planning and placement. Not only do they have the services and benefits offered by their individual career counseling office, but they have the broad range of central services as well. Program activities and resources of CPPS, in combination, constitute a highly dynamic and sophisticated career planning and placement function which would be difficult for any but the richest or most humane of institutions to provide. Most important, however, is the fact that employers gain access to quality students in these small institutions in a way which few small-sized institutions could match.

Nor would these services be as effective even if they were individually duplicated. Clearly, employers participate to the extent they do because of the efficiency afforded them to contact the graduates of a number of colleges. Both time and funds of employers are better spent because of the centrality of this service and the extent of their contacts with potential employees.

Graduates from one college will also gain access to employers who may, in fact, be interviewing for a very special or limited kind of graduate; e.g., liberal arts graduates participating in interviews for business opportunities. The negative influence of the insularity of institutions, employers, majors, and students is thereby challenged in favor of greater inclusiveness.

4. Publications

Special note should be made of the excellent publications produced by the Career Planning and Placement Service for use by students and recruiting organizations. Their contents cover the range of subjects important to employers and students: descriptions of each member institution, the majors offered by each, some of the career positions of former students with these majors, personal assessment exercises, the variety of careers reflected in the employment of former graduates, procedures for students interested in utilizing recruitment services, some commonly asked questions with answers about the placement service, college interview forms, advertisements by potential employers (including larger corporations actively seeking candidates), forms for students to use in maintaining their own record of interview activity, sample instructor evaluation forms, a description of the registration procedure and the recruiting cycle, statements on preparation for an interview and the evaluation used by recruitment personnel, guidelines for constructing a resume, letters used in the employment process, and references to the career information library with a brief description of the variety of job opportunities.

Students are also provided with statements on college recruitment, including principles and guidelines, and the ways in which employers and candidates may honor these guidelines.

A calendar is circulated showing known companies and the dates on which they will be available at the AUC, together with a schedule of employment representatives to be on campus. Worksheets used by students throughout their career search activities serve as a useful stimulant and guide.

A publication especially designed for employers is also provided by the AUC in the interest of broadening employer awareness of the work and accomplishments of previous graduates and their field of work or service.

B. Staffing

The number and level of staff in each of the institutions and at the Center (staff, other than students, are shown in FTE terms):

Table 5
Career Planning and Placement Staff

	Professional	Other	Students
Atlanta University	.20	.50	3
Clark College	1.00	-0-	2
Morehouse College	1.00	-0-	4
Morris Brown College	1.00	2.00	6
Spelman	1.00	2.00	0
Total for campuses	4.20*	4.50	15
Atlanta University Center	1.00	2.00	1
Grand Total	5.20	6.50	16

*The Theological Center relies on the resources of the AUC for much of its services.

For the Center's staff to be responsible for all employer contacts and invitations, interview scheduling, and student contacts for these interviews, as well as half of the career planning seminars, requires a high degree of efficiency. The organization and distribution of the work load does not appear to be evenly divided or adequately interreliant.

C. Costs

The cost of the placement services at the Center is listed below. It includes provisions for salaries, seminars and conferences, publications and their distribution, and other office costs. Current campus expenditures for campus placement services are also shown. These costs are almost exclusively for salaries.

Table 6
Summary of Costs

AUC's Career Planning and Placement Service	$ 62,300
Campus Placement Costs (est.)	70,000
Total	$132,300
Cost if each campus operated its service alone (est.)	$146,800
Net Cost Avoided	$ 14,500

The estimate for individually-operated services is derived from the findings of the College Placement Council on the average cost of college and university placement services for the size of classes which these colleges graduate.

The costs projected to 1979 are adjusted for inflation in the years since 1973, the year the CPC study was conducted. The Center's institutions would be spending about $29,360 each, based on the national average. (The Theological Center is projected at spending only $2,580, considering its function and size.)

D. Evaluation and Cost Effectiveness

One may question whether these colleges would be spending less because of their economic circumstances, or more, because of an increased consciousness of and commitment to employment opportunity for young blacks.

It is supposed that they would likely be spending more than the national average based on their location in a center of leadership in the South. Nevertheless, only the national average was used for this study.

The result is that the institutions of the Center realize a cost advantage annually of $14,500.

Here is an example of a consortium program which increases productivity substantially while reducing unnecessary duplication. Cooperation has increased the attractiveness of each member school, even though it only slightly decreases their expenditure for career advancement services.

E. Some Observations

There are some curiosities in this program: it is a curiosity and a surprise that the Center does not provide more attractive and adequate space for use by employer representatives. No office in any of the institutions, whether of the placement staff or of other senior staff members, was in as poor a condition or was so limited in space as was the Center's CPPS office. The placement office, a rundown temporary building that should be demolished, is surrounded by handsome traditional academic structures and attractive new campus buildings. It is a curiosity that the institutions which so clearly see the advantage of a joint service to their graduates should be so unmindful of the impression made on employers who are compelled to interview worthy students in such shabby surroundings. One wonders if that experience shapes - and perhaps depresses - the offers students receive because of an assumption by employers that students in such surroundings will take anything in order to get out and up. Certainly, the conditions of the facility will make it more difficult for the coordinator to get potential employers to return or to get any but lower-level recruiters to come to the Center's office. This fine service deserves a much more attractive physical environment!

It is also a curiosity that an active cooperative education program is not a part of the service. Opportunities for such a service do exist to a limited degree in the institutions but they do not capitalize on the strength of the CPPS and its extensive employer contact. Such centralized cooperative education services would open important work and study opportunities for students.

Finally, it is a curiosity that the career counseling officers are institutionally oriented, rather than employer or job-market oriented. Each may have an office on an individual campus and another office in the Center, but a special focus for employer cultivation and, therefore, student counseling could be highly productive. Staff specialization would stimulate greater competence in placement, just as such specialization usually does elsewhere. All campus CPPS staff are now generalists serving all interests with uniformity that lacks the focus needed. A next step for professionalization of the CPPS could be the development of a clearer focus by campus leadership on the potential of organizing by advancement functions, rather than by campus politics or history.

Nevertheless, there is no doubt that the CPPS of the Atlanta University Center is one of the strong student services in the nation when compared either to the placement services of individual colleges and universities or with other consortia. A model program it truly is!

Other Cooperative Student Services

Through the course of this study, additional cooperative student services were identified which clearly qualify as being substantial and growing interreliant programs. They properly fit within the area of this study. Yet, it is not possible to do a thorough documentation of their cost effectiveness since sufficient data could not be generated for analysis. Most of these programs are in transition.

The programs included here constitute an important contribution to our understanding of the ways institutional interreliance is gaining maturity in a number of social program areas. They are, therefore, briefly presented for the reader's review.

A. Cooperation and Career Planning and Placement - The Claremont Colleges

In 1975, the Claremont Colleges received a three-year grant from the Mellon Foundation for career services for women. Prior to the grant, cooperation had been sporadic. Career planning and placement services at each college were rudimentary. The grant enabled the three colleges to fund a full-time career planning administrator and a full-time secretarial staff. The grant also funded approximately $6,600 each year for jointly planned programs and publications. A Tri-College Career Planning Council (from Scripps, Pitzer, and Pomona Colleges) composed of 5 representatives from each college (alumna, student affairs staff person, student, faculty member, career planning director) met periodically to review the program and make recommendations. The resulting coordination of program, counseling, and publications provided far greater service to the students of the three colleges than could have been provided by each office operating separately. At the end of the three years, each college continued financial support for the career planning directors and for partial secretarial assistance. The Director of Career Development at Claremont Men's College also joined the group, adding to the diversity of workshops, recruiters, etc., available to the students of all the colleges.

No quantifiable data are available for cost effectiveness determination. However, the advantages for students, staff, institutions, etc., in career planning and placement services fall into several categories:

1) A cooperative recruiter program is administered by two of the colleges for the students at all four. More recruiters (graduate school and employer representatives) come to the Claremont Colleges just because they can interview students from four rather than one or two schools. If each college had to run its own recruiter program it would be somewhat more costly. For students, the advantages are that the smaller staffs at two of the colleges are relieved of any responsibility for recruiting. For recruiters, the advantages are a larger pool of of interviewees and ease in making arrangements, since they have to contact only one office.

2) Workshops, seminars, programs, and conferences are coordinated and offered each month. The career planning staffs can arrange a widely varied series of workshops, etc., providing three to four times the number of individual programs for students at all of the colleges than could be arranged by any one college separately. The staff time in arranging these programs is reduced. Students have more and diverse workshops to attend.

3) Employment information is available on full-time, part-time, and summer-time opportunities. One college, Pomona, has the main responsibility for all of the colleges to accumulate, post, and distribute employment information. Students from all the colleges use the office for this information. The advantage to students from this arrangement is minimal, except that the career planning offices at their own schools would not have the staff time to accumulate the information; i.e., without cooperation, students would be at a disadvantage. The advantage to staffs is that it is primarily a clerical type job which need be done only once.

Placement advising at each college reflects the unique curricular emphasis and different student needs found at each college. Each career planning office tends to be better informed in specific areas than its counterparts at the other colleges; e.g., Scripps has more information and advice on careers in arts administration, museums, publishing. These differences are common knowledge in the career planning offices, and students are easily referred to the office where they can receive the most help. The advantage to staff is that more attention can be paid to only a few areas. Counseling and information for students is more thorough and professional.

The main advantages of cooperation in this program are that more and better services are available to students with less staff time and less money spent on program. The cost of each of these services has never been determined at one college, much less at all four. One can only guess that to maintain the current level of service without cooperation would require an increase in staff hours of some magnitude, perhaps as much as 50%.

B. The Career Counseling and Placement Program of The Colleges of Mid-America

This program was founded in 1972 with outside grant support and has continued with that support in the ensuing years. Its purpose was to help the individual institutions overcome the problems of both smallness of size and isolation from major urban centers. By pooling the graduating classes, a larger pool of employable students is created, thereby attracting major employers to the institutions. There are two interviewing centers: one in Sioux Falls and another in Lemars, Iowa. Students who attend the institutions drive to those interviewing centers to meet with employers. Last year 120 days of interviewing occurred at these two different locations. Approximately 80 employers interview students each year; another 70 contact the Center and ask for recommendations. The appropriate students are contacted and they then go for an interview with that employer. There are about 200 employer customers during the year who are acquainted with the program and with whom the coodinator talks about employing students. About 150 of them have positions open at the time and, therefore, actually consider student applicants.

One of the Coordinator's major responsibilities is employer cultivation. The extent of responsibility here has been slowly reduced as the procedure became more of a specialized, technical major.

The program also offers professional development experiences for campus career staff. Workshops are offered on counseling techniques and the design and development of model programs. They exchange information on comprehensive approaches to career counseling. Outside consultants are involved.

The general pattern of staffing in career counseling and placement is that career counselors are being hired for campus work and the placement function is mainly a consortium function. The consortium role is increasingly effective because it rests on solid, campus-based, career preparation programs. Campus efforts have increased the number of students using the consortium job development system at CMA and have considerably improved the quality of the candidate.

There seems to be a clearer focus for what is campus and what is consortium business. There is a better integration and a better understanding of the placement role as the capstone of a total career program. The center program has to be institutionally based while the placement program can be a consortium activity. The consortium encourages and assists in the development of the campus career programs.

The staff time used on the campus for career counseling is also a half-time position which is often merged with academic counseling. Placement and financial aid is another combination but the financial aid responsibilities usually consume almost all of a staff member's time. Career counseling and academic/personal counseling is often combined with the teaching of a course(s) on careers. At least half the time, however, is spent in counseling.

The total budget for the consortium placement project is about $20,000. This includes half of the coordinator's salary as well as publications, travel, committee training, communication and other office costs. The program in job development and placement has been systematized to a point where a secretary can handle the mechanical aspect of it and the coordinator can focus on the employer cultivation and arranging for professional development activities.

The strongest point of this service and its main purpose is that it provides a much broader spectrum of employment to the students than they could have with a single, institutionally-based program. This is especially true for the very, very good student. It has provided an opportunity to go with a major national corporation and receive a higher beginning salary. The highest salary offered was $30,500 but most first offers were as high as $17,000 and $18,000. For the upper bracket it provides unusual opportunities. To some of the hard to place people, it provides special opportunities because of this broader spectrum of options. This service does not provide a job to every student but much is added beyond what a single institution could offer.

The Consortium attracts both large and middle-sized corporations though many of those are branches of a national corporation. With the smaller businesses, they tend to only call and indicate a job opening. Students are recommended and they go directly to the business for an interview.

In the Colleges of Mid-America consortium a classic consortium experience exists in that the college that has been the most advanced feels very free to share its experiences with the other campus directors who listen and see counseling and placement practices better than their own. The other institutions have thus acquired increased momentum through this exchange of ideas and energy.

C. Use of the Joint Psychiatric Services of the New Orleans Consortium

The three member institutions of the New Orleans Consortium contract jointly for a consulting psychiatrist. A ten-month contract costing $5,000 provides for three hours of professional services per week. Additionally, the psychiatrist is on call for emergency needs.

Representatives from the institutions' counseling departments have indicated that the services would cost each institution the same amount, if contracted alone because the on-call and on-site time factor would not be diminished. Their judgment was that the joint services rendered $10,000 collective savings each year.

The counseling staff reported an additional benefit that must be taken into account in assessing the value of the joint use of professional services. One of the psychiatrists each week is involved in training and professional development of counseling staff from the three institutions. The number of staff members at the individual institutions is not large enough to provide alone the necessary climate or condition for an effective inservice training program. The three institutions collectively offer sufficient size and variance in personnel, experiences, and techniques to facilitate a dynamic and fruitful interchange of ideas and peer group teaching.

They estimate that if a psychiatrist were hired to provide professional staff training, at the current hourly charge of $50, comparable services would cost at least $200 weekly considering preparation, travel, and on-site visit time, or up to $8,000 for ten months. If purchased by each institution individually, rather than collectively, the cost would triple to $24,000.

D. College Council Placement Office (CCPO) of the New Hampshire College and University Council

The College Council Placement Office (CCPO) is a centralized placement service sponsored by the on-campus placement offices of twelve colleges.

The main goals of the CCPO are: to increase the numbers of direct student-employer contacts and to generate new ones that would not otherwise be available; to establish a central file of data sheets of those persons seeking professional and technical employment; to act as a central clearinghouse for information about job opportunities; to promote increased awareness of the career options available to new college graduates.

CCPO programs are open to students and alumni of the Council colleges. They are planned to increase awareness of career opportunities and to provide preliminary contacts with employers. The programs include:

1) Job Referral Service - the CCPO maintains contact with employers from business, industry, and government throughout New Hampshire and New England. When notices are received, they are duplicated and sent to each placement office and to all qualified CPPO registrants.

2) Microfiche Files - The CCPO maintains files of the microfiched job listings published by the Employment Security Offices of New Hampshire, Massachusetts and Vermont. Students and alumni are welcome and encouraged to use these listings.

The College Council has initiated a Computer Placement Service for member students and alumni. This program allows for faster and more efficient distribution of job vacancy information to candidates on file with the Office by using a computer to search the applicant file to find qualified and interested candidates for positions. In the first six months of operation, this program sent out 20,000 job vacancies vs. 2,000 the previous year.

All graduates need to do to use this service is to obtain a Basic Data Sheet, and complete the form. Data from this form including career and occupational preferences will then be fed into the computer. When job vacancy notices are received by the CPPO, they are coded and also fed into the computer to find the best qualified and interested candidates. A list of names and addresses is then received and the job vacancy information is sent directly to the candidate.

The Teacher Information Service (TIS) develops a series of bulletins which contain all in-state and out-of-state teacher openings received by the CPPO and member institutions. These TIS bulletins are published approximately every two weeks from April to September. This is the only listing of its kind produced in New Hampshire and is available from campus placement offices or by contacting the CPPO.

Career Information Days are held during the Fall semester, when students and alumni are invited to talk with representatives from private business, human service agencies, and federal agencies. Freshmen, sophomores, and juniors are urged to join seniors and alumni in attending these programs devoted to increasing student awareness of career opportunities. Since 1973 more than 150 separate employers have been involved to increase communication between the worlds of education and work. In 1978 alone, 70 employers and 273 students and alumni participated in the day-long exchange.

Job Fairs occur during the Spring semester when approximately 60 employers are present to interview students and alumni for employment opportunities. Education Job Fairs are also offered during the Spring semester when educational majors and school superintendents have a chance to review the teaching opportunities expected to be available the following September. School superintendents from all New England states are invited to participate and interview candidates.

All CCPO programs and activities are provided at no cost to students, alumni and employers. Well over 1,000 employers make use of the CCPO each year.

E. Cooperative Placement Services of the Union of Independent Colleges of Art

The UICA's cooperative placement services were began in 1971 with a series of meetings of the Placement Directors from the member colleges. These meetings were called to exchange information on the needs, objectives, systems, and procedures necessary for effective career development work with young artists, designers, and craftsmen.

Very quickly it became apparent that the guidelines for operation, research on art careers, career development resources, and support for campus development in placement services were needed. This early effort in consort helped focus the attention of campus leadership on career needs three years before the current popular interest in it emerged.

A specialist in career services was hired by the consortium. A first objective was the creation of a manual for the operation of part-time and full-time job placement offices.

These Office Operation Manuals were completed over a two-year period and drew on the experience of knowledgeable persons in the field. Many institutions have experienced placement as a "hit or miss" affair because of inadequately trained staff, high staff turnover, and insufficient campus support from faculty and staff. These Manuals seek to alleviate these institutional inadequacies. It already has been demonstrated that a new and untrained placement director can, by using these Manuals, create an operation that is almost ready-made. One recently appointed director used the guide which describes what to do, when and how to do it, the forms to use, and the procedures to follow, with the result that her new office's service was highly effective within a period of only six weeks.

The research on artist's career options was conducted and the findings published as the Career Resources List (CRL) for Visual Artists. It is currently available to students in the nine UICA member colleges, other colleges and universities, high school art teachers, guidance counselors, and individual artists, including alumni. It indicates the many kinds of positions graduates have held or now hold and, thus, gives students a broader understanding of the realistic options open to them upon graduation. The listings show specific jobs in different categories; e.g., industry, government, electronic-media, education, and in individual business enterprise. To date over 50,000 of these 18-page brochures have been published and distributed.

As an introduction to a career in art, a Careers in Art film was developed. It was designed for use by upper-classmen, graduate students, and recent alumni. It charts available career options, the planning needed for them, and corrects stereotypes and misconceptions that currently plague creative students moving into the work world. It explores in detail a number of career alternatives which graduates of a visual arts college have pursued following graduation. It also defines how they should regard prospective employers. Winning 5 international film awards, it is especially helpful in learning what other artists have accomplished, for themselves, their employers, and the public. The $30,000 cost for this film was wholly funded by a private foundation.

The UICA is also filling a major and long-standing need of visual artists by providing a national job referral network. This was created with the assistance of the Career Planning and Placement officers of the member colleges in an effort to satisfy employer needs for access to qualified applicants and to provide maximum employment opportunities for alumni.

Through this network, information on job opportunities available in each region served by a UICA institution is compiled and distributed. It allows graduating seniors and alumni access to job opportunities on a national basis, and provides them with employment information beyond the region, and therefore the capability, of any single institution.

After having successfully completed its earlier objectives, the UICA placement function shifted to a decentralisation of responsibility. This was done in order that the member colleges might assume greater initiative, campus office services strengthened and individual directors given greater responsibility for cooperative efforts.

In 1976-77, the colleges' placement directors were encouraged to develop and refine new areas of placement knowledge which would be mutually supportive and sharable among member colleges, as well as other institutions. To accomplish this, the UICA Placement Mini-Grants Program was initiated.

Placement Directors of the UICA colleges were invited to submit projects for funding which were judged on both the basis of their direct benefit to an institution's placement office and the joint benefit to all when the results were shared. Costs were allowable for limited amounts of staff time, materials, and other needed resources. The average cost per project was $1,950 and the total consortium expenditures over three years for all projects on all the campuses was $41,000.

The proposals which emerged revealed a diversity of interests, needs, and expertise. They were coordinated in a way which gave increased complementarity in the projects undertaken.

The Cleveland Institute of Art developed a plan to conduct a national survey of employment histories. A statistically valid sampling of recent graduates and alumni of all UICA member colleges was used. The results are being used with students during career counseling sessions, by parents as well as employers who inquire about pay scales and advancement in professional practice and, also, to comply with Federal Consumer Information Act, issued by the U.S. Office of Education. Further, UICA placement, development and admissions officers, deans and faculty members may gain additional insights into the work history of graduates and, thus, analyze trends and their effects on future needs of industries, schools, and communities with respect to the artist and his or her development.

Other projects included a grant to the California College of Arts and Crafts whose placement director planned an employer cultivation effort with prospective employers in the Northwest United States for the purpose of making them aware of the qualifications of art students and of increasing the number of job opportunities offered them from that region. At the Maryland Institute, College of Art, the Director developed a Career Planning and Job Search Skills Manual as well as a Career Resources Lending Library, to which the other

UICA colleges will have access, either directly or in bibliographic form.

Kansas City Art Institute and Atlanta College of Art conducted an employment search among arts institutions and art-related business organizations, as well as a series of workshops for graduating students and alumni on artists' survival strategies and practices.

The placement director at the School of the Art Institute of Chicago, under a consortium mini-grant researched, detailed, and initiated a Cooperative Education plan as a part of their regular school curriculum and instructional experience for art students. The kinds of alternative approaches available and useful in a professional school environment on study and work - for credit and pay - would be shared with all member colleges. The California College of Arts and Crafts, using these research findings and guidelines, has now also initiated a Cooperative Education program. Each college is now receiving federal funds in excess of $30,000 annually to effect these individual programs.

The results of the completed projects have been shared, the sought-after improvement in campus operations has been realized, and placement staff morale was improved. By the exercise of this increased responsibility, campus plans were effected for the next step, which, when translated into projects and programs augur for stronger placement services through interreliant endeavor.

CHAPTER V

GROUP PURCHASING

II COOPERATIVE PURCHASING

Consortium: Hudson-Mohawk Association of Colleges & Universities

Title of Program: Cooperative Purchasing

Participating Institutions:

Albany College of Pharmacy
Albany Medical College
The College of Saint Rose
Hudson Valley Community College
Maria College
Rensselaer Polytechnic Institute
Russell Sage College
Schenectady County Community College
Siena College
Skidmore College
Union College

Other institutions are members of the consortium but do not participate in its cooperative purchasing:

Albany Law School
Empire State College
State University of New York at Albany

On occasion a few other institutions, who are not members of the consortium, have participated in cooperative purchasing.

Program Administrator: Mr. Robert M. Briber, Executive Director, Hudson-Mohawk Association of Colleges & Universities, cooperating with the Purchasing Officers of the participating institutions.

A. Brief History

The staff of Hudson-Mohawk Association looked at cooperative purchasing in 1969, while the consortium was being incorporated. There seemed to be an obvious opportunity to save money through pooled orders and larger quantity purchases. Thus, price and supplier data about fuel oil and other purchases were collected and distributed to Business Officers. One Vice President, embarrassed that his fuel oil prices were higher than those at another college, took the information from other colleges to his supplier and extracted a price reduction. Cooperation, therefore, saved him $17,000 per year. He had to be content to stop there, because the Business Officers did not want to go farther into joint purchasing at that time.

1. The reasons against cooperative purchasing

The arguments of the Business Officers, which seem to be repeated in whatever consortium the subject was broached, included some good and some bad reasons.

"We have well-established relationships with our vendors that are worth more than any savings we might realize."

In the case of fuel oil, for example, "the vendor knows where all our tanks and their filler caps are and how to find a maintenance man late at night. He has provided us with a quality product at a good price for years. We don't want to change."

"Our prices are about as good as you can get."

Often this "good price" claim is based on information provided by the vendor; sometimes, of course, it is correct. Whether or not it is a good reason to avoid cooperation is another question. A low-priced vendor might lower the price even farther to win a cooperative bid.

"Our vendor is a well-heeled and generous member of the college's Board of Trustees."

In other cases, he is an alumnus or some other authority. He is often portrayed as an actual or potential benefactor no one wants to irritate. Sometimes he even has a vote on the Board of Trustees. This can be a total deterrent to cooperative purchase of one or two items, but the argument should not carry over into other products.

"Vendors don't like it."

Most cooperatives have their detractors, sometimes including vendors, who lost the cooperative bid or fear they will lose an impending one. However, the best vendors seem supportive, win or lose.

"We all have special product needs. We could never standardize on a single product."

In coarse paper products, such as toilet tissue and hand towels, an industry tactic is to provide the buyer with dispensing machines which cannot easily use a competitive product. Then, when a new vendor wants business, machines have to be changed to accommodate the new product. An analagous situation exists with compressed laboratory gasses and their cylinders. More often, however, special requirements are related to an idiosyncracy of the buyer.

"We don't want to set up a cooperative warehouse."

There are successful examples of cooperative warehousing but, by and large, this is a misconception. The cooperative need not take title to the product, or store it. Delivery is arranged between the vendor and the campuses. Usually fewer, larger deliveries reduce cost so the campuses are wise to take as much per delivery as they can store.

"The consortium is not the right group."

Consortia often include institutions whose buying practices and regulations are very different, as does Hudson-Mohawk Association. Among this group, certain institutions - both public and independent - have not participated actively. Enough interested institutions participate to make the project work, however, and the non-participants have not been critical. Experience shows that consortium work often proceeds on such partial support. In other words, for some institutions, the consortium is the right group and for others it is not.

"We don't have time."

Purchasing agents often have duties other than purchasing. They can also be secretaries, plant managers, insurance buyers, or whatever. This can have two predictable results, both of which are deleterious to effective procurement:

- They do not have time to keep or collect statistics or vendor information, and good purchasing is based on good information;
- They do not have time to develop their skills as professionals, in a ramified and changing profession. As an important side effect of effective cooperation among buyers, however, they can all benefit from the knowledge of the most skilled as exposed in meetings and shared projects.

"We don't think that other college knows what it's doing."

Of course, this argument subsides when people work together and get acquainted, but it must be considered.

"Don't rock the boat."

There are examples in most colleges where certain purchasing decisions are made by individuals or groups other than the purchasing agent; e.g., specialty chemicals are bought by someone in the chemistry department. If very few purchases are made through the central purchasing office, cooperative purchasing by that institution as a

> whole with others is difficult at best. A sometimes painful first step is necessary, that of centralizing most purchases or, at least, those above a certain minimum dollar value.

In total, these arguments were persuasive enough to prevent cooperative purchasing from succeeding at Hudson-Mohawk Association for nearly eight years.

Cooperative purchasing is not common in other consortia either. When the consortium began, there apparently were no organized efforts among New York institutions in the same market area to buy cooperatively, and only a few examples in the nation. Independent colleges and universities in New York State do have an extensive set of purchasing alternatives, including use of State contracts, independent action, and/or membership in the Educational and Institutional Cooperative Service. State universities and colleges must buy through the State contract. The public community colleges can proceed either way so long as certain practices are followed. Coordinated purchasing action among these various colleges and universities has been slow in coming.

2. The crucial Presidential commitment

In early 1977, at a meeting of Presidents of Association colleges, Dr. George Low, President of Rensselaer Polytechnic Institute, said that he would put the purchasing power of his institution behind an effort to save money through cooperation. He felt that the consortium had to prove cost-effectiveness and believed that savings were available. The Director of the Association responded that, if others agreed to cooperate on that basis, purchasing could save the members at least their dues annually. The Chief Executive Directors of Hudson Valley Community College and the Albany Medical College committed their institutions to the effort. Thus, the three institutions in the Association with the greatest available purchasing power were embarked by their Presidents on an experiment in cooperative purchasing.

A consortium of several hospitals in the same region, formed at about the same time as the Association, had had several years of successful experience with cooperative purchasing and had saved hundreds of thousands, even millions, of dollars. (Why hospitals have been more successful than colleges in this activity is an interesting question. School systems, too, are ahead of college groups in cooperative purchasing.) As a first step in the college venture, the chairman of the hospital purchasing group was invited to meet with a group of college purchasing agents, to tell them of his experiences.

3. The first bid

The second step was to inaugurate the first contracts. A common bid for 2.6 million gallons of #6 fuel oil at RPI and Skidmore could be organized quickly, while formal bidding procedures were being worked out for larger bids. Such a bid letter went out, five responses were received and the contract was let to the lowest bidder. Two other colleges which could have participated in the bid did not do so because of relationships with vendors which they chose not to test. Nonetheless, the experiment was on its way. When the winning bid was evaluated, the two bidding colleges estimated that they would save $33,857 in total on their oil consumption for the ensuing year, compared to the price they would have paid individually as related to the formal posted price.

4. Other bids and the bidding procedures

Since public community colleges must handle their buying in a wholly public way, procedures established at Hudson Valley Community College for purchasing were followed in subsequent cooperative bids. These included:

- Formal preparation of a letter inviting vendors to bid;
- Public announcement of the bid in the newspapers five working days before the bid opening;
- Vendors' bids received and sealed until the bid opening, to which all vendors were welcome;
- Sworn statements by vendors that they were not in collusion;
- Preparation and distribution of a "bid results summary" for the vendors who responded.

Such procedures are not required of the independent colleges in the Association, but "sunshine" provisions by and large make good sense. The trust necessary for effective cooperation prospers when nothing is hidden.

Other important characteristics of this bidding procedure were worked out by the purchasing agents. The process is more precisely "joint pricing" than joint purchasing. The Association does not take title to the product, store it, or pay for it; all these relationships take place between the college and the vendor. The colleges agree to buy an estimated quantity of product from the vendor, to take delivery directly as specified in the bid letter or as negotiated, and to pay the vendor directly. They do not agree as a cooperative necessarily to accept the lowest bid, but feel they must agree on a reason if they choose not to.

All in all, the cooperative process followed competent purchasing practices developed elsewhere through much experience by many able purchasing agents.

Several additional contracts were let in the ensuing months.

Miscellaneous Office Supplies

RPI had a history of successful experience with an office supplies bid for the quantity of miscellaneous office supplies (a wastebasket here, scissors there, etc.) which add up to considerable quantities. Their supplier gave 25% off list price for these items.

Most other campuses were paying list price or close to it. The products sold by many vendors of these products are similar and the prices are quoted publicly.

The Association compiled an estimation of annual purchases at the nine campuses interested in participating in a bid on these items, which added up to approximately $74,000. The bid response was effectively 36% off list price. Annualized savings on these total purchases, when compared to the previously allowed discount, were approximately $13,000.

Mimeograph and Copier Paper

Nine colleges were interested in a joint bid on mimeo and copier paper, which they let after competitive bid to a local distributor. Estimated savings on purchases of roughly $100,000 were $20,000, annualized.

It should be noted that the Manager of the copy center on one campus told his purchasing agent that the bid product, inexpensive though it might be, did not work on his big copier. The purchasing agent knew it had worked on a similar machine elsewhere. When the center manager insisted he did not want to buy the product, he was asked to write the Chief Executive Officer and explain. The purchasing agent felt the college should cooperate and, if it did not, wanted to be sure the Executive Officer knew why. Instead of writing such a letter, the Manager called in the copier company, had the machine adjusted, and used the product.

Typewriter Maintenance

This is a common problem and a substantial college expense. A complex cooperative bid was designed which began for different colleges at different dates and allowed flexibility in the type of service each obtained. The bid went out, five vendors responded, and the contract was let to the lowest responsible bidder - who turned out in a few weeks to be unable to handle the number of machines involved. The next highest bidder was asked to pick it up and did very satisfactorily. Estimated savings against the previous year's price ranged from $9 to $26 per machine, an estimated total of $20,400 on an annualized basis.

"Tattletapes"

This is the book-marking product used in the 3M Book Detection System. Because the vendor published a price-quantity relationship, this product provides an interesting example of the economies of scale (see Chart 1). One hundred thousand were bought for three colleges and four other non-consortium users. College savings on a $7,000 purchase, against published price, were $2,300.

"Blue Books"

There were 250,000 of various sizes bought. The estimated savings against prices, at similar quantity, were $2,200 on a total bill of $3,825.

Polyethylene bag liners

Sixteen tons; 250,000 liners. The estimated savings on a $14,000 purchase, against the previous year's prices, were $2,100.

The Association is currently in the process of developing bids on several other products, including laboratory gases, photographic film, and fire extinguisher maintenance. Several of the bids noted above have been let a second year and a purchasing-related venture, a cooperative surplus equipment auction, was held which netted participating colleges some $14,000 from the sale of otherwise valueless equipment (see case study).

5. The proof

A year after George Low of RPI asked the Association to save the colleges money, the Presidents were given statistics derived by their own purchasing agents (Table attached entitled "Savings Reported by Purchasing Officers Through Cooperative Contracts") which showed that savings of $75,748, conservatively calculated, would be realized through cooperative purchasing that year. (This is a somewhat different calculation than the total noted above, product-by-product, because the time periods differ. Note also that it includes a loss experienced by one college which used the joint bid on miscellaneous office supplies to purchase quantity lots of separate items, which should have been bid separately.) Dues paid by the cooperating institutions for their membership in the Association would amount to $69,000 for the same period.

Direct involvement by the Presidents had been required. Good purchasing practices by a group of competent purchasing agents had been followed and, as a result, proof of the cost effectiveness of cooperation was demonstrated.

6. Costs and cost analysis; Benefits

The cost savings reported by Hudson-Mohawk Association purchasing agents to their Presidents were direct and immediate. They were reductions in the price they had been paying for the same product or service. Larger purchasers, by and large, saved a smaller percentage of cost, but more dollars; smaller purchasers saved a greater percentage, but fewer dollars. To illustrate, using the successful "Tattletape" example again (see Chart I):

	Quantity Bought	Price had they bought alone	Price through Coop Purchase	Savings	
				$	%
College a	3,500	$0.12 ea.	$0.07	$175	42%
College b	32,500	0.0925 ea.	0.07	$731	24%

In general, it is felt that cost savings will settle in the 10-12% range against the prices the institutions would have paid had they bought individually.

One characteristic of such savings is that they require continued cooperation if they are to be maintained. As soon as the cooperative ceases to function and the institutions return to individualized purchasing, the prices they pay will return to a higher level.

Other important advantages accrue to cooperative purchasing agents and their campuses.

- They often tend to deal with the same or competing vendors and salesman. Information and even gossip about these vendors is frequently exchanged which helps purchasing agents act more knowledgeably and effectively.

- As mentioned above, these men and women differ considerably in their understanding and ability to deal with various specialized purchases. Usually, however, one or more of the group has been through each purchase before and can provide guidance and insight to the others.

- Organized purchasing can simplify vendor relationships and save time. Jake Bishop, of the Massachusetts group mentioned at length as a case study, feels that time savings are equivalent in dollar value to cost savings. To illustrate, each of the Association's purchasing agents had spent much more than an hour a week dealing with office supplies salesman from several different firms, maintaining good relationships and "spreading business around". Now, with an annual contract in effect, they can say "Come back next year when we bid again" and devote the hour to more complex problems.

The cost of cooperative purchasing is not insignificant, even though it is returned many times over by realized savings. The work in developing contracts, bid lists, etc., can be done by individual purchasing agents or, as in the case of the HMACU, by the central office staff with help from the purchasing agents. Often, the contract and vendor list is available from previous contracts, but effort is required to see that the lists are complete, quantities established, advertising written and inserted, etc.

Because much of this work was centralized in Hudson-Mohawk Association offices, it can be quantified fairly accurately. The "Tattletape" purchase cost the Association $325 in the time spent and overhead, plus $25 in out-of-pocket expense, for a total of $350. It saved $2,300. Overall, the Association estimates that about 20% of its total time and expenses, approximately $17,000, was spent in saving the colleges the initial $75,745. Subsequent repeat orders of the same materials are much less expensive, requiring perhaps a third of the time required before, because the groundwork has been laid.

B. The Practice Elsewhere

In the course of this research, conversations have been held with a number of purchasing agents in cooperatives other than the Hudson-Mohawk Association. Also, a thorough library search was conducted. Two impressions emerged:

One, now a conviction more than an impression, is that the men and women buying cooperatively are at the forefront of their profession and work in strong institutions. They are using sophisticated tools to earn their institutions the best prices, such as multi-vendor and full-line contracts, two-tier bidding, and other devices which can work to both the buyers' and the sellers' advantage.[1] They know their business and take a professional pride in doing it well.

The second impression is that hospital consortia are well ahead of their academic colleagues in cooperative purchasing. It is not clear, however, why this is so. Both can be voluntary groupings of independent institutions, although some of the cooperating college groups (such as those in Ohio) are public institutions reporting, at least theoretically, to the same office; both have their "don't-tread-on-me" authorities, faculty or physicians; both health care and education are highly labor intensive industries so that goods and services purchased are only a fraction of total costs.

> "Hospital group purchasing arrangements have existed for 50 years. In the past 25 years they have come to account for a significant part of hospital purchases. There are now purchasing groups in almost every part of the United States and most hospitals belong to them."[2]

This, according to the same monograph, has occurred in spite of common vendor opposition, purchasing agents who avoid cooperation "as a matter of machismo", and the complexities of standardization and consensus-building. No such claim can be made for college groups.

Agencies other than hospitals have also developed cooperative purchasing programs. The U.S. Office of Education funded a major study of cooperative purchasing among public school districts in 1969.[3] The study identified 84 groups which had organized to purchase supplies and equipment cooperatively (one group was noteworthy in that it included a junior college in its membership).

Musterman and Hall[4] sampled all school districts in the United States and of the 1,135 responses received, 692 reported cooperative purchasing involvement. Other studies identify local government agencies as fairly active in cooperative purchasing.

Why are hospitals and other groups ahead of higher education? Charitable answers are hard to find. It seems that managements in these other sectors simply are more responsive to cost pressures than academic administrators. Certainly everyone is aware of the rising costs of health care as total health care expenditures skyrocket. A multitude of private and governmental efforts have been directed at health care costs. They are a prime topic of political atention. Public school districts typically are subject to voter approval of their budgets, so, historically, they have been sensitive to cost savings. In fact, the cost effectiveness of cooperative purchasing is widely realized in these other sectors.

Why have so few of the legions of college Presidents who proclaim their financial troubles in detail not agreed to cooperate with their colleagues in common purchasing? Why, indeed! Whatever they are doing or not doing, other sectors have more commonly recognized the cost effectiveness of common purchasing.

1. Leading institutions, leading purchasing agents

Another reference regarding hospital cooperative purchasing supports the impression that the most effective purchasing agents in the leading institutions are at the forefront. In "Factors Affecting Acceptance of a Hospital Group Purchasing Program",[5] Hahn and Hardy conclude, after a thoroughly professional analysis designed to clarify relationships between assumed determinants of buying decisions and behavior as expressed in the purchasing process:

> Although it is difficult to identify cause-and-effect relationships in a study of this kind, the implications of its results are clear. Hospitals actively participating in a group purchasing program obviously are the front-runners. The individual characteristics of their purchasing agents indicate a more holistic view of the purchasing function, a healthy attitude toward cooperation with other organizations to reduce total costs, and professionalism, which should lead to better purchasing practices. From an organizational standpoint, these hospitals also are front-runners. They exhibit less conflict and more cooperation among functional areas, more congruency of goals and perceived duties, and centralization of purchasing (an obvious benefit).

2. Other academic experiences

In further research dozens of purchasing agents were interviewed privately and at professional meetings. The work and comments of a number of these men and women are cited here where they illuminate important elements of this discussion. In addition, case studies of several consortial cooperative purchasing efforts are attached where further detail about specific projects seems warranted.

Great opportunity exists for further research and for the support of new ventures to test and extend these findings. Questions of the appropriate geographical reach of a cooperative purchasing effort, the wisdom or effectiveness of including institutions from different not-for-profit sectors of the economy, and the variations among product groups of the price-quantity relationship, among other topics, all merit further study.

In addition to the comments on hospital cooperative purchasing, it is necessary to mention the pioneering work in inter-college cooperation at Five colleges,Inc.,in Western Massachusetts,work which was ably carried on further by Jake Bishop, University of Massachusetts at Amherst and the effective work and articulate descriptions of consortium buying by Jerry Evans at Ohio University. One set of experiences at Five Colleges, Inc. and the Massachusetts Higher Education Consortium are detailed as a case study. In the paragraphs that follow, this article will describe other experiences.

No doubt some organized consortium buying efforts have been inadvertently overlooked. For example, efforts reportedly are underway in Illinois and New Hampshire. Consortium buying, however, is uncommon. Less than two dozen examples have been identified in all of American higher education. Still, the author apoligizes to those whose work in this complex field has not yet come to his attention.

a. Massachusetts Higher Education Consortium

The first group visited was the Massachusetts Higher Education Consortium (MHEC) and its contracts coordinator, Jake Bishop, Director of Procurement, University of Massachusetts/Amherst. This group grew out of a voluntary cooperative effort started by Five Colleges, Inc. in 1967. Thirteen cooperative contracts developed by Five Colleges, Inc. and administered by U Mass/Amherst, became the base for a MHEC contracting procedure which is now available to 41 member colleges and universities through the Commonwealth. Bids were solicited for 29 contracts in 1977-78. Members are not required to buy under them, but Bishop says "they are crazy not to." His annual report for 1977-78 summarizes their experience:

> From this report, it can be seen that the 41 vendors, 31 of which are Massachusetts firms, have received almost $1.5 million in business from our membership. The list price value of this material was almost $2.2 million, with the member schools enjoying a gross savings of $667,000.

On the subject of the savings, Bishop goes on to say:

> Of course, we realize that not all of this figure can be counted as 'new' savings to the institutions not previously realized. However, I believe it is safe to say that even a conservative percentage of one-third (of the total savings) could be considered as new.

He argues that this alone amply justifies the existence of the consortium.

In conversation with Bishop, he described the effort necessary to carry the earlier pioneering effort to wide acceptance. Interest was expressed in the project by highly placed state government officials, and so the state institutions became actively involved. Where a history of public/private cooperation existed, in Five Colleges Inc. and the Worcester Consortium for Higher Education, Inc., all their member institutions were included. As college acceptance grew, Bishop felt that visibility for the consortium was necessary to give credence to its contracts. He designed a letterhead and bid form and travelled 3,500 miles the first year visiting and "selling" vendors on the idea.

He feels that vendors have, in general, been highly supportive and, further, that consortium buying is a means to sort out responsible vendors who can deal with sizeable contracts effectively.

Controversy surrounds this area of cooperative buying, controversy strong enough to bring cooperating administrators to genuine anger. Not all vendors can win these competitive contracts. Someone has to lose. Those who lose have been known to match or beat the winning price in order to keep a valued institutional customer, and incidentally, of course, to keep the customer from cooperating in consortium efforts. The institution, thus wooed away, may claim (at least when colleagues from other institutions are not around to hear) that it gets prices as good or better than the cooperative. Described this way, the events follow a pattern of cause and effect which could irritate consortium buyers; in real life, it seldom is so clearly drawn. Chicanery and anti-cooperative efforts are common enough, however, that some purchasing groups ask each defector to explain to the total group in open meeting, the reasons for not cooperating in a contract. No venture of this kind proceeds without some controversy. Bishop's concern that visibility and credibility are important seems well placed.

Further details about the Massachusetts experiences and about one award winning cooperative purchase are included in the case study, attached, which deals with MHEC and Amherst College.

b. Inter-University Council Purchasing Group (Ohio)

Gerald Evans at Ohio University in Athens, along with Bishop and one or two others, has led the purchasing profession in its development of consortium buying. Evans' story begins in 1963, when the Regents of the State directed that its colleges and universities get started on inter-university cooperation. Various groups of administrators and faculty met and are still meeting, especially including some 30 or 40 persons associated with purchasing in the state. Ohio State University is by far the largest purchaser in the group, however, and Evans says that "State is Big Daddy" to the group.

Evans believes that cost savings realized through their aggressive purchasing efforts amount to 12% to 18% of the total purchases thus committed (similar to Bishop's estimate). Purchases for the consortium amounted to $9.4 million in 1977-78. From approximately 40 contracts, the following accumulated 5% or more of the total sales:

Audio Records/Duplicating Tapes
Dictation Equipment
Helical Scan Tape
Kodak Projectors
Laboratory Equipment
Lamps
Manila Folders
Mini Computers
Motion Picture Film
Office Furniture

227

Polaroid Film
Projection Lamps
Reproduction Equipment
Scientific Supplies
Typewriter Ribbons/Paper
Typewriters

The earliest significant success for the group was on calendar pads and holders, on which a high (and visible) percentage of savings was realized.

Evans described the process by which responsibility for specific agreements was assigned to various institutions and people. In doing so, he echoed a common theme about cooperation: leadership is a crucial ingredient. These cooperative projects, however organized, require men and women with initiative who will follow through to a conclusion. Whatever organizational pattern is established, the process requires a willingness to cooperate with the group. There are examples of one or two cooperative ventures which started with success and enthusiasm but ended in disappointment because the leaders departed. Organization is important, of course, but it ranks second to leadership.

c. University of California

The author spoke by telephone with Tom Trainum at UCLA and Peggy J. Krotz, purchasing coordinator with the University's Systemwide Administration in Berkeley. Again, their professionalism and generosity were evident. The program under which they operate, established in 1967, is explicit, as quoted in a bulletin from the Office of the Vice President, Business and Finance:

> It is the policy of the University that University-wide pool purchases and supply agreements be used by all campuses, in order to obtain the greatest economic advantage from planned, quantity purchasing.
>
> Items covered by mandatory University-wide purchases or agreements will not be bought from other sources except as authorized by this directive. Campuses are also responsible for reporting on vendor performance and product quality under University-wide purchases and agreements and for suggesting potential items and vendor sources for University-wide buying.

A list of commodities purchased indicates that on September 30, 1978, the system had some 242 contracts available for use. Management of each of these contracts is assigned to a "Material Manager", on one or another of the university's campuses, who is responsible on a University-wide basis for purchases under the contract.

The index of these contracts by commodity classification follows in order to illustrate the range of goods and services which can be purchased this way when a process has some 10 years to work. Not all of these products would be repeated in other consortia, but others might be added by other groups.

How much flexibility is beneficial in consortium buying is subject to differences of opinion. Some would argue that the total purchases must be committed through the contract in order to extract the best terms on a continuing, consistent basis. The Associated Colleges of the Twin Cities program (see case study) used a letter signed by and committing all institutions involved to accept a bid. Others insist that the individual purchasing agent be given flexibility item-by-item and contract-by-contract to choose the appropriate low price, service, and reliability for a given institution, sometimes even after the cooperative's price is established. A voluntary consortium such as the Hudson-Mohawk Association decides which contracts to pursue based on discussion of the need and opportunity, and then proceeds by consensus, expecting all participants to honor the bid.

One other interesting comparison is provided by Jake Bishop, on the one hand, who wrote most of the contracts used by the group in Massachusetts, with advice from others, and on the other hand, by the decentralized-with-centralized-authority program in California, where materials managers on different campuses arrange the purchases. Each consortium which considers purchasing must approach it through some variant of these alternatives.

d. Insurance Purchases

Claudette Dwyer, Executive Director of The Council of West Suburban Colleges, has reported on the successful cooperative purchase of employee health accident and life insurance by colleges in her region (see the February, 1978, "Update" on this CIL project, incorporated as part of an attached case study).

Stan Love, Business Officer at the Kansas City Regional Council on Higher Education, has described a student health insurance plan developed there in 1966-67 and maintained since that time. The work involved drawing people from different institutions together to develop specifications which recognized the differing needs and attitudes of different institutions. Modifications and changes have occurred since that time and Love feels that the participating colleges now save from 23% to 25% on their programs. They also have experienced considerable success with a blanket travel accident insurance plan.

Finally, John Batley of the Westtown School in Pennsylvania described a cooperative insurance purchasing program among Friends institutions to the 1976 Annual Conference of the National Association of Educational Buyers in Boston. Several years before, a group of business officers from Friends institutions explored cooperative purchase of several lines of insurance, including property, general liability, automobile liability and physical damage, workmen's compensation and boiler. They chose as agent the firm of Marsh and McLennan, Inc., after interviewing five major firms, and then developed a basic insurance program. The group selected carriers of the policies and subsequently permitted dozens of different Friends organizations (including hospitals, schools, and colleges) to select the lines of coverage they desired.

Batley estimated that the participating institutions averaged anywhere from 10% to nearly 40% annually on initial premium savings. He also credited the cooperative effort as leading to important insurance program improvements at participating institutions, and to continued savings because the group now has a greatly improved market position in obtaining its coverages.

Each of these projects required design of an insurance "package" which allowed considerable flexibility among various institutions in drawing out the insurance coverage each wanted. Further, each involved finding an agent who could design and place a complex insurance package for the benefit of the participating institutions. The programs then repeated the same experiences reported in other cooperative ventures, where agreement is followed by joint action resulting in both cost savings and improved program operation.

e. Other Examples

An additional, extremely interesting case study of experiences at the Associated Colleges of the Twin Cities (ACTC) is attached. This five-college consortium agreed, as one of its original purposes, to develop cooperative purchasing, established the necessary committee of persons concerned with purchasing, and hired a part-time Business Coordinator. He was able to report, a few months after he was hired, that cooperative purchasing had conservatively saved twice his salary and expenses and, also, that all the other benefits of cooperative purchasing had been realized. The ACTC experience may be considered a textbook example of success.

There are several other verifiable examples of cooperative purchasing.

The Consortium of Universities of the Washington Metropolitan Area has been purchasing liquid helium and liquid nitrogen cooperatively for a number of years, under the leadership of Dr. William D. Gregory of Georgetown University. The University maintains the centralized supply and fills flasks for the cooperating institutions, who send their own trucks to collect the product. Costs vary from one-fifth to one-half the price the institutions would pay individually.

Tom Harig, Director of the Office of Procurement and Contract Administration at Washington University, reported on some success among institutions in the St. Louis area. Their first major success, which provided them with excellent savings, was in a lamp bulb contract.

Dr. Alex Cameron, Executive Director of Rochester Area Colleges, reported a $26,000 savings realized by two of his major institutions when, sensitized to the benefits of cooperative purchasing, they reported to IBM that both institutions were buying a similar piece of computing equipment. They suggested that a reduction in installation and delivery costs might be passed on to the colleges. IBM responded positively, with immediate reductions by the two colleges.

The benefits of cooperation in computer purchasing is further demonstrated by the EDUCOM consortium, a nationwide grouping of people on nearly 300 campuses who are concerned with the purcahse and use of computing equipment. EDUCOM inaugurated a program to obtain discounts for its members in the fall of 1975. Currently, according to a Fall 1978 "EDUCOM Bulletin", 19 vendors participate actively. A single set of terms and conditions is negotiated with each vendor by EDUCOM against which the members purchase. Vendors offer discounts on these products and in return obtain mailing lists of members, opportunities to display their wares at EDUCOM meetings, and other advantages. To summarize, EDUCOM estimates that savings to its members, when compared with the fair market price of the computer and computer-related products bought, amounted to $1,634,000 between July 1, 1977, and July 30, 1978.

C. Conclusions

There are not many absolutes in cooperative purchasing beyond the first and most important recognition that important cost savings can be realized. The essential elements of the process to realize these savings are:

Authority Authority is provided for some voluntarily at a meeting of Presidents, for others by a systemwide mandate, and for still others by political interest or pressure. There is no substitute for authority. Someone or some group in authority must understand that cost savings will be realized through the work of purchasing cooperatively. The pressures of the cooperative process will test whether or not the agreement and the authority are genuine.

Leadership Every successful venture illustrates the central importance of the person or persons who take leadership. It can be exercised from a number of roles - and perhaps leadership becomes less important as authority increases - but it is always vital. Further, if the leadership does not continue, the effort will not be successful.

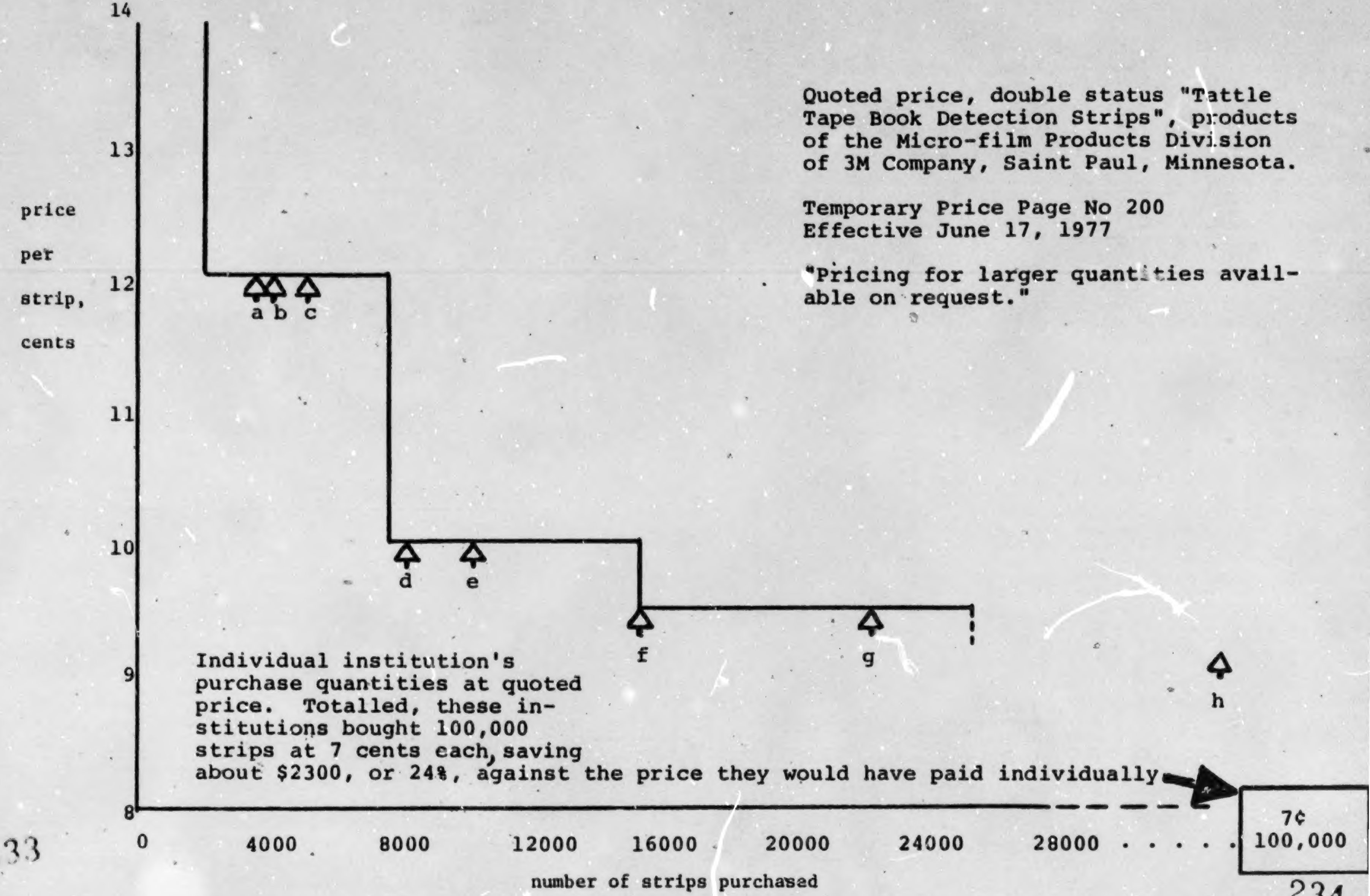
Organization The means by which cooperative contracts are administered, as well as the products with which different groups begin, differ from each other. The means and the products are not as important, however, as having sensible, well-understood management practices. The group then can agree as to how to proceed.

Savings Conservative estimates indicate that savings (which can vary from a few percent on commodities bought in quantity, such as fuel oil, to nearly 50% on specialized items bought in smaller quantity), can be expected, overall, to settle roughly in the 10% to 20% range. Cooperation reduces the amount spent by the cooperating colleges, compared to the price they would pay buying alone.

Every cooperating group indicates that additional benefits (shared experiences and information among men and women with similar roles) are truly substantial.

It is difficult to understand, then, why colleges and universities are not pursuing these opportunities more aggressively when in so many other ways they express concern over rising costs.

There are many opportunities for consortia in these cooperative ventures. Institutions can save money and, in the process, realize new significance for the consortium movement.



Quoted price, double status "Tattle Tape Book Detection Strips", products of the Micro-film Products Division of 3M Company, Saint Paul, Minnesota.

Temporary Price Page No 200
Effective June 17, 1977

"Pricing for larger quantities available on request."

Individual institution's purchase quantities at quoted price. Totalled, these institutions bought 100,000 strips at 7 cents each, saving about $2300, or 24%, against the price they would have paid individually

Chart 1

Price-Quantity Relationship

Savings Reported by Purchasing Officers Through Cooperative Contracts

(From the start of contract through June 30, 1978).

	Fuel Oil June	Office Supplies August	Paper Supplies Sept.	Type'r Maint. Feb.	Total to June 30	Est. Annualized	Fee Structure
ACP	No	325	75	275	675	1,111	3,000
Law	Does Not Participate In Cooperative Purchasing						3,000
AMC	No	4,000	800	1,625	6,425	9,292	3,000
CSR	No	3,000	No	July	3,000	3,274	4,000
Empire St.	Must Buy Through State Contract						3,000
HVCC	No	2,525	9,700	Sept	12,225	15,222	10,000
Maria	No	300	300	?	600	712	3,000
RPI	18,857	2,930	2,432	July	24,219	25,179	10,000
Sage	No	331	2,123	?	2,454	3,089	8,000
SCCC	No	(3,000)	No	No	(3,000)	(3,273)	4,000
Siena	No	1,000	400	1,000	2,400	4,004	8,000
Skidmore	15,000	500	1,000	August	16,500	16,830	8,000
SUNYA	Must Buy Through State Contract						10,000
Union	No	?	240	?	240	308	8,000
	33,857	11,911	17,070	2,900	65,738	75,748	85,000

Table 1

ALPHABETICAL INDEX OF UNIVERSITY AND STATE CONTRACTS BY COMMODITY CLASSIFICATION

September 30, 1978

ITEM	GROUP	CAMPUS
Acids	400	LA
Adding Machines & Calculators	700	[illegible]
Adhesives & Tapes	331	RI
Agricultural Chemicals	600	RI
• Agricultural Tools	667	RI
Air Conditioners	325	IR
Air Filters, Auto	840	RI
Air Filters, Non-Automotive	325	IR
Alcohol	430	LA
• Aluminum	140	LA
Animal Foods	684	RI
Athletic Equipment	900	LA
Audio Equipment & Tapes	770	SB
Auditing Services	088	SD
• Auto Spare Parts	840	RI
Badges & Cap Insignia	530	SB
Bags & Sacks	891	RI
Balances	484	SF
Ballasts	303	IR
• Bandages	575	DA
Batteries, Secondary	300	IR
Bearings	240	IR
Bedding	652	SC
Biochemicals	438	LA
• Blankets	652	SC
Blood Diagnostic Reagents	511	SD
Blood Fractions	511	SD
Book Cases	706	RI
Books	755	LA
• Bowl Cleaner	635	BE
Building Glass	191	DA
Bulletin Boards	721	LA
Business Cards	714	BE
Cabinets	705	RI
• Calculators	700	BE
Cane, Safety	853	SD
• Cards, Data Processing	713	BE
Carpeting	649	SC
Carts, Service	870	DA
• Cash Terminals	700	BE
Cassettes, Audio	770	SB
Cassettes, Video	737	SB
Casters	249	DA
Chairs	701	RI
• Chalkboards	721	LA
Charts & Graphs	713	LA
Chemicals, Agricultural	600	RI
Chemicals, Bio	438	LA
Chemicals, Diagnostic	438	LA
• Chemicals, Inorganic	400	LA
Chemicals, Organic	410	LA
Chemicals, Radioactive	435	LA
Cleaning Equipment & Supplies	630	BE
Cleaning Tissue	637	RI
• Clocks	487	SF
Clothing, Medical	584	LA
Clothing, Protective	930	SB
Coarse Paper Products	891	RI
Compressed Gases	135	SD
• Computer Equipment & Supplies	960	BE
Computer Paper & Cards	713	LA & BE
Computer Services	087	BE
Cooler, Water	325	IR
Copy Machines	700	BE
• Credit Cards, Gasoline	120	BE
Curtains, Shower	654	SC
Custom House Broker Service	085	SA

ITEM	GROUP	CAMPUS
Data Processing Equipment & Supplies	960	BE
Demineralized Water Service	083	SD
• Desks, Office	704	RI
Dictating Machines	700	BE
Dietary Paper Products	891	RI
Difco Media Culture	437	LA
Disk Packs, Computer	960	BE
• Dog & Cat Food	684	RI
Dressing, Surgical	575	DA
Drugs, Non-prescription	511	SD
Drugs, Prescription	531	SD
Dry Ice	135	SD
• Duplicating & Dictating Machine Supplies	728	LA
Electrical Distribution	303	IR
Electrical Hardware	331	IR
Electron Microscope Grids	460	SF
Electron Microscope Service	082	SD
• Electronic Supplies	310	IR
Envelopes	716	LA
Fasteners	200	DA
Fertilizers	600	RI
File Folders	717	LA
• Files, Office	705	RI
Film, Photographic	730	SB
Film, X-Ray	737	IR
Filters, Laboratory	461	SF
Fire Hose & Extinguishers	920	SF
• Floor Pads	637	BE
Floor Waxes & Cleaners	635	BE
Food, Animal	684	RI
Food, Human	681	BE
Freezers	687	BE
• Freight Handling Service	085	SA
Fuels, Petroleum	123	BE
Furniture, Commercial	709	RI
Furniture, Office	701-709	RI
Gages, Strain	451	SF
• Garden Tools	667	RI
Gases, Compressed	135	SD
Gasoline	123	BE
Glass, Building	191	DA
Glassware, Laboratory	440	SF
• Gloves, Surgical	584	DA
Gloves, Work	930	SB
Graph Paper	713	LA
Hand Tools	360	DA
Herbicide & Pesticides	600	RI
• Inorganic Chemicals	400	LA
Insecticide, Herbicide	600	RI
Instruments, Surgical	540 & 556	LA
Janitorial Supplies	635	BE
Kidney Machines & Supplies	595	DA
• Labels, Computer	713	LA
Laboratory Corks	460	SF
Laboratory Equipment	460	SF
Laboratory Glassware	440	SF
Laboratory Plasticware	450	SF
• Ladders	224	DA
Lamps, Fluorescent & Photo	320	IR

ALPHABETICAL INDEX OF UNIVERSITY AND STATE CONTRACTS BY COMMODITY CLASSIFICATION

September 30, 1978

ITEM	GROUP	CAMPUS
Laundry Service	083	SD
Library Books	755	LA
Library Supplies	753	LA
• Liquid Hand Soap	633	BE
Locks & Latches	223	SD
Lubricants	120	BE
Lumber	180	DA
Maintenance, Lab Equipment	082	SD
• Maintenance, Office Equipment	086	SD
Matches	123	BE
Material Handling Equipment	870	DA
Mattress & Springs	652	SC
Medical Gases	135	SD
• Metals	140	DA
Microfiche Readers	730	SB
Microphones & Accessories	770	SB
Microscopes	467	SF
Misc. Lab Equip. & Supplies	460	SF
• Motor Vehicles	810	DA
Napkins, Paper	637	RI
Needles, Hypodermic	556	LA
Nursery Labels	604	RI
Nursing Supplies	570	DA
• Nuts, Bolts & Screws	200	DA
Office Furniture, Cabinets	705	RI
Office Furniture, Chairs	701	RI
Office Furniture, Desks	704	RI
Office Furniture, Tables	702	RI
• Office Machine Maintenance	086	SD
Office Machines	700	BE & SC
Office Supplies, Misc.	720	LA
Office Supplies, Paper	711	LA
Office Supplies, Ribbons	722	LA
• Oil & Grease	120	BE
Organic Chemicals	410	LA
Oxygen	135	SD
Paint Thinner	116	DA
Paints	112	DA
• Paper, Cut Stock	711	LA
Paper Products, Food Service	891	RI
Paper, Tissues & Towels	637	RI
Parenteral Solutions	531	SD
Peat Moss	604	RI
• Pencils & Pens	721	LA
Personnel Services	088	SD
Pharmaceuticals	531	SD
Photographic Supplies & Equip.	730	SB
Pipettes	442	SF
• Pillows	652	SC
Plastic Bags	891	RI
Plastic, Sheets & Forms	174	DA
Plumbing Supplies	280	SC
Plywood	180	DA
• Power Supplies	303	IR
Prescription Containers	440	SF
Protective Clothing	930	SB
Racks, Storage	899	SC
Radio Chemicals	436	LA
• Reagents, Diagnostic	511	SD
Recording Tape	770	SB
Refrigeration Gases	135	SD
Refrigerators & Freezers	687	BE
Ribbons, Typewriter, Computer	722	LA & BE

ITEM	GROUP	CAMPUS
• Safes	705	RI
Safety Cans	693	SD
Safety Glasses	920	SB
Scratch Pads	715	LA
Services, General Office	086	SD
• Services, Shipping	085	SA
Services, Travel	084	SA
Services, Utilities	083	SD
Shavings, Wood	180	DA
Shelving	899	SC
• Shower Curtains	654	SC
Silver Recovery Service	083	SD
Soap, Liquid Hand	633	BE
Soil Amendments	600	RI
Solvents, Chemical	410	LA
• Solvents, Petroleum	125	BE
Specialty Gases	135	SD
Specialty Glassware	441	SF
Steel Products	140	DA
Stencil Supplies	728	LA
• Strain Gages	481	SF
Surgical Dressings	575	DA
Surgical Instruments	540	LA
Surgical Supplies	570	DA
Sutures	558	LA
• Syringes, Needles	556	LA
Tables, Office	702	RI
Tape, Computer	960	BE
Tea	681	BE
Temporary Personnel Services	088	SD
• Terminals, Computer	960	BE
Tires	840	RI
Tools, Agricultural	607	RI
Tools, Hand	360	DA
Tools, Metalworking	350	DA
• Towels, Paper	637	RI
Training Aids	790	LA
Transparent Tape	131	LA
Trucks, Hand	870	DA
Typewriter Ribbons	722	LA
• Typewriters	700	SC
Typing Stands	702	RI
Underpads	652	DA
Vehicle Spare Parts	840	RI
Vials	460	SF
• Video Equipment	780	SB
Video Tape & Cassettes	737	SB
Waste Disposal Service	083	SD
Water Coolers	325	IR
Water Demineralization	083	SD
• Wax, Floor	635	BE
X-Ray Film	737	IR
Xerox Equipment	700	BE

FOOTNOTES

[1] Two-tier bidding, as described by Tom Trainum at UCAL, deals with the problems of size variation among institutions. The process establishes different prices for large and small purchases, allowing the vendor to price realistically and thus avoiding a situation where one size institution carries the bulk of the costs for the other. Full-line and multi-vendor contracts, described by Jake Bishop at University of Massachusetts/Amherst, are contracting procedures which avoid some pitfalls. A full-line contract allows the vendor to offer a full-line of products (or a uniform markup over cost), thus avoiding the excessive particularization of a separate contract for each different product. Multi-vendor contracts allow purchasers to select between several vendors, each of whom has agreed to meet the terms of the contract. These contracts maintain an element of competition even after the contract has been let.

[2] Ammer, Dean S., "Purchasing and Materials Management for Health Care Institutions", D.C. Heath and Co.: Lexington Books, 1975.

[3] Forsythe, Ralph A. and Hardin, C.E., "Development of Guidelines for Cooperative Purchasing Agencies and Procedures for Public School Districts", Office of Education, DHEW. Bureau No. BR-8-H-028, June, 1969.

[4] Musterman, Richard E. and Hall, Arthur V., "Survey Shows Extensive Use of Cooperative Purchasing", in School Business Affairs, June, 1973, pp. 148-151.

[5] Hahn, Chan K. and Hardy, Stanley T, "Factors Affecting Acceptance of a Hospital Group Purchasing Program", Journal of Purchasing, August, 1972, pp. 54-68.

Consortium: Massachusetts Higher Education Consortium

Title of Program: Cooperative Purchasing

Participating Institutions:

Forty-one colleges and universities in Massachusetts, including 11 private institutions (see Attachment A)

Program Administrator: Mr. Jake E. Bishop, C.P.M., Contracts Coordinator, Massachusetts Higher Education Consortium, cooperating with the Purchasing Agents and Business Officers of the participating institutions.

A. Brief History

Five Colleges, Inc., composed of Amherst, Hampshire, Holyoke, Smith and the University of Massachusetts/Amherst, began cooperative purchasing in 1967. It was one of the first such efforts in America among colleges and universities. (Recent cooperative purchasing among these institutions won a $10,000 NACUBO Cost Reduction Incentive Award, described later.) A comparable purchasing group was formed among the college members of the Worcester Consortium for Higher Education in 1968.

When interest was expressed by the Governor's Office in 1975 in generally improving management practices in higher education throughout the state, a group of administrators from campuses across the state formed the Massachusetts Higher Education Consortium (MHEC) to explore improved buying practices specifically.

The group decided, early in 1977, to negotiate a body of contracts in the name of MHEC for the benefit of member campuses. They began with the contracts negotiated earlier through Five Colleges, Inc. with particular help from U Mass/Amherst. These first contracts were placed for 34 member institutions. The Worcester group joined in January 1978 and contracts were thereafter negotiated for 41 members.

1. Objective

The objective of the group is to create contracts for member campuses which are financially beneficial and which supplement state contracts by involving products necessary to teaching and research programs in higher education.

2. Description

After designing and printing the required bid forms and stationery for MHEC, bids were collected for 29 products in 1977-78 and for 36 products thus far in 1978-79 (see Attachment B).

Quarterly reports are kept showing each institution's activity under each contract, detailing product list price, average discount, net sales, and dollars saved. Jake Bishop, in summarizing 1977-78 activity, reported that 41 vendors had received almost $1.5 million in business under the program. The list price value of the material purchased was almost $2.2 million, with member schools enjoying a gross savings of $669,000.

In an earlier, but related, award-winning, cooperative purchase, Five Colleges, Inc., approached Savin and A-Copy in 1976 with a proposal for a bulk, consortium price on the new Savin bond-paper office copier. The Consortium offered guaranteed purchase of ten machines in the next fiscal year if the price was right. Results were dramatic. While the regular single unit price for the Savin copier would have been $5,400, maintenance $450 for 100,000 copies, and supplies $60 per case, the new negotiated price was $4,100 for the copier, $450 for maintenance but with no limit on copy usage, and $34 per case for supplies.

B. Costs

Cooperative purchasing demonstrates cost effectiveness by reducing required dollar outlays when the economies of scale are realized by pooled purchases.

Bishop estimated in the summer of 1978 that he spends two days per week on the work of MHEC, and that others in the group spend about 3 days per week, for a full-time equivalence of one person per week, plus part-time secretarial help. MHEC thus employs one professional purchasing agent to negotiate some 40 contracts. A generous estimate could put these costs at $30,000-$40,000 per year when all expenses are included.

The Five College purchase of Savin copiers required considerable initiative (provided by the personnel at Amherst), but it involved administrators in work they would have done anyway, cooperative purchase or not.

C. Benefits

1. Bishop, in his "Annual Report on Contract Activity for the Period July 1, 1977 - June 30, 1978" reports: the following table breaks these figures down by the various types of schools that are members of the MHEC.

	Gross Sales	Net Cost	Gross Savings
Universities	$1,670,759	$1,166,160	$504,599
Five Colleges	200,447	140,422	60,025
State Colleges	153,514	106,271	47,243
Community Colleges	135,430	94,174	41,256
WCHE	53,707	37,924	15,783
Totals	$2,213,610	$1,544,711	$668,899

   Bishop feels that, conservatively estimated, at least one-third of these savings are "new" to the participating institutions; that is, they are savings they would not have realized without cooperative purchasing.

   He also reports, as do purchasing officers across the country, that very real benefits are realized when purchasing agents sit down together to discuss common problems, products, and vendors. These men and women have many common interests and benefit enormously from open discussions.

2. The Savin copier savings were quantified by David R. Hornfischer, Assistant to the Treasurer, Amherst College, in reporting to NACUBO on the results of the Five Colleges purchase of 21 machines and Amherst's purchase of five:

   a. Five Colleges' Savings

(1) Machine purchase

Regular price	$5,400
Contract price	4,100
Savings	$1,300/machine

Total Savings - 21 machines $27,300

(2) Annual supplies/maintenance savings

	Maintenance	Supplies	Paper	Total
Regular price	$450/100M	$60	$3.60/M	
Savings per unit	$450 (est)	$26	.42/M	
Amount used	21	280 cases	4200/M	
Annual savings	$9450	$7280	$1764	$18,494

(3) Total 1977 Savings - Five Colleges - $45,794

b. Amherst College Savings

(1) Previous system

	Volume/Yr.	Cost/Yr.
Xerox 7000	360,000	$12,000
Xerox 3600	300,000	8,400
Xerox 2400	120,000	3,600
Xerox 2400	180,000	5,400
Xerox 3100	120,000	3,600
Total	1,080,000	$33,000

(2) Revised system

5 Savin @ $4,100 - $20,500

Assuming 2-year write-off	$10,250
1 Xerox 3107 - Rental to provide reduction capability	3,600
5 maintenance contracts @ $450	2,250
5 drum replacements @ $216	1,080
TOTAL COST	$17,180
Annual Savings	$15,820

D. Validation procedures

These cost savings have been widely reported to participating institutions and are quoted by many officials at these institutions as the legitimate benefits of cooperation. Savin copier salesmen quote the Amherst/Five Colleges experience. The E&I Cooperative developed a similar contract, thus making the savings broadly available to National Association of Educational Buyers members (NAEB). Bishop is widely employed as a consultant, and teaches at NAEB conferences. At those conferences, he often deals specifically with the subject of consortium buying.

Attachment A

Massachusetts Higher Education Consortium Membership List

Universities

University of Massachusetts:
  Amherst, Mass. 01003
  Boston, Mass. 02125
  Medical School, Worcester, Mass. 01605
  Marine Station, Gloucester, Mass. 01930
  Suburban Experiment Station, Waltham, Mass. 02154
  Agricultural Experiment Station, E. Wareham, Mass. 02538
Southeastern Massachusetts University, North Dartmouth, Mass. 02714
University of Lowell, Lowell, Mass. 01854

State Colleges

Boston State College, 625 Huntington Ave., Boston, Mass. 02115
Bridgewater State College, Bridgewater, Mass. 02324
Fitchburg State College, Fitchburg, Mass. 01420
Framingham State College, Framingham, Mass. 01701
Massachusetts College of Arts, 364 Brookline Ave., Boston, Mass. 02215
Massachusetts Maritime Academy, Buzzards Bay, Mass. 02532
North Adams State College, North Adams, Mass. 01247
Salem State College, Salem, Mass. 01970
Westfield State College, Westfield, Mass. 01085
Worcester State College, Worcester, Mass. 01602

Community Colleges

Berkshire Community College, West St., Pittsfield, Mass. 01201
Bristol Community College, 777 Elsbree St., Fall River, Mass. 02720
Bunker Hill Community College, Rutherford Ave., Charlestown, Mass. 02129
Cape Cod Community College, West Barnstable, Mass. 02668
Greenfield Community College, One College Drive, Greenfield, Mass. 01301
Holyoke Community College, 303 Homestead Ave., Holyoke, Mass. 01040
Massachusetts Bay Community College, 57 Stanley Ave., Watertown, Mass. 02172
Massasoit Community College, 290 Thatcher St., Brockton, Mass. 02402
Middlesex Community College, Springs Rd., Bedford, Mass. 01730
Mount Wachusett Community College, Elm St., Gardner, Mass. 01440
North Shore Community College, 3 Essex St., Beverly, Mass. 01915
Northern Essex Community College, 100 Elliott St., Haverhill, Mass. 01830
Quinsigamond Community College, 670 W. Boylston St., Worcester, Mass. 01606
Roxbury Community College, 424 Dudley St., Roxbury, Mass. 02119
Springfield Technical Community College, Armory Square, Springfield, Mass. 01105

Five Colleges, Inc. (Affiliated with the University of Massachusetts-Amherst)

Amherst College, Amherst, Mass. 01002
Hampshire College, Amherst, Mass. 01002
Mount Holyoke College, So. Hadley, Mass. 01075
Smith College, Northampton, Mass. 01060

Worcester Consortium for Higher Education, Inc. (Affil. w/UMass-Worcester, Worc. St.)

Anna Maria College, Sunset Lane, Paxton, Mass. 01612
Assumption College, 500 Salisbury St., Worcester, Mass. 01609
Becker Junior College, 61 Sever St., Worcester, Mass. 01609
Central New England College, 768 Main St., Worcester, Mass. 01608
Clark University, 950 Main St., Worcester, Mass. 01610
Holy Cross College, College Hill, Worcester, Mass. 01610
Worcester Polytechnic Institute, Institute Rd., Worcester, Mass. 01609

Attachment B

INDEX

Contract	Number
Aldrich Chemicals	001
Amersham Products	002
Boehringer Mannheim Biochemicals	003
Bookcases, Wood	004
Calculators	005
Cleaning and Repairing Analytical Balances and Micro	006
IBM Office Machine Service	007
Laboratory Instrument Repair	008
Laboratory Contract	009
Lakeside Equipment	010
Mattresses*	011
Mettler Balances	012
American Optical Microscopes	013
Bausch & Lomb Microscopes	014
New England Nuclear	015
ICN Nutritional Biochemicals	016
pH Electrodes	017
Plastic Petri Dishes	018
Reusable Glass Pipets	019
Recording Charts	020
Sartorius Balances	021
Sigma Chemicals	022
Typewriter Ribbons and Lift-off Tapes*	023
Worthington Biochemicals	024
Savin Toner	025
Office Furniture	026
Dormitory Beds	027
Exam Books	028
Swift Instruments and Accessories	029
Dictating and Transcribing Equipment	030
Stencil Duplicating Equipment and Supplies*	031
Furniture Repair*	032
Caps and Gowns*	033
Window Air Conditioners*	034
Major Electrical Appliances*	035
Pens and Pencils*	036

* Contract not available at this time. To be furnished at a later date.

Consortium: Council of West Suburban Colleges

Title of Program: Joint Purchase of Employee Health, Accident, and Life Insurance

Participating Institutions:

- Elmhurst College
- George Williams College
- Illinois Benedictine College (and St. Procopius Abbey)
- North Central College
- Benet Academy

Program Administrator: Ms. Claudette Dwyer, Executive Director, Council of West Suburban Colleges, cooperating with appropriate campus officials.

A. Program

1. What: Collaboration in determining broad guidelines for insurance coverage in obtaining quotations, and in securing coverage and services.

2. Why: To improve or maintain specified coverage at cost effective rates.

3. Keys to securing objectives:

   a. Self-insured clause to reduce risk;
   b. Negotiating an acceptable deductible figure;
   c. Flexibility for participating institutions to maintain different specifications and administrative arrangements, if desired.

4. Essential Condition: Commitment to a long-term, cohesive relationship among cooperating institutions is essential to building a creditable history and to offsetting predictable negative reactions to losses which will occur at times within the history of the group.

5. Advantages of using an experienced broker:

   a. Good position among underwriters;
   b. Access to a wide market;
   c. Flexibility within the marketplace;
   d. Always represents the client only;
   e. Free of obligation to any given underwriter;
   f. Competent staff support;
   g. Experience with other associations.

6. Principles:

   a. Economies of scale result from increased volume (size of group) and controlled risk (minimize claims through design of plan and effective claim control);
   b. Administrative efficiency results from consolidation of services;
   c. The larger the group, the more advantageous its position for negotiating cost reductions.

B. Costs and Benefits

The West Suburban Intercollegiate Council Life Insurance and Accidental Death and Dismemberment Plan, established December 1, 1974, and the Health contract, established March 1, 1975, are impressive illustrations of cost effectiveness and economy through cooperation.

The following figures document the projected savings minus paid claims, which equals the savings for the stated time duration, based on current premiums in comparison with premiums paid under the previous policy. The figures are based on the census immediately prior to the effective date of the plan and cover the period December, 1974-March, 1976. The projected savings figures assume that the previous employee contribution level was maintained. Since different institutions began participation at different times, these figures represent a partial total of savings realized.

Projected Savings	$181,386.00
Paid Claims as of 3/1/76	46,360.00
Savings as of 3/1/76	135,025.40

Additional figures are available for the six-month period, February 1-July 31, 1977, which show that an additional $46,000 was saved by participating institutions when their actual premiums and paid claims totals were subtracted from the premium they would have paid had they not been insured in this manner.

CHRONICLE OF THE PROCESS

Officers involved in the process:

Executive Vice Presidents, providing direction to business officers and personnel officers.

	Timetable	STEPS
1.	January 31, 1974	The principals agreed to consult with a broker and with a risk management firm on survey of cost and coverage.
2.	February 15, 1974	Business officers prepare SURVEY OF EXISTING COVERAGE (liability, hazard, medical, life, travel, etc.) and INSTITUTIONAL PROFILE DATA (total enrollment, total faculty and staff, insurable value). Two-man subcommittee collects and collates data for use with firms.
3.	February 1 - March, 1974	Subcommittee consults with firms.
4.	June 19, 1974	Presentation of a "Survey" or a "Study" alternatives by two brokers to determine the feasibility of joint purchase of employee benefit insurance.
5.	July 1, 1974	Analysis of each broker's proposal; review and response.
6.	July 18, 1974	Revised specification of benefits forwarded to brokers.
*7.	September, 1974	Broker selected.
8.	Sept. 30, 1974	Combined specifications approved by all parties. Requests for quotations authorized.
*9.	December, 1974	Coverage for term life insurance becomes effective on the first college campus.
*10.	Jan.-May, 1975	Three additional colleges initiate life, AD&D coverage.
*11.	March, 1975	Health insurance contract established at first college.
12.	May 30, 1975	Administrative Agreement drafted as basis for governing respective parties to the arrangement.
*13.	June 1, 1975	Health care coverage initiated at second and third colleges.
*14.	August 1, 1975	Health care coverage initiated at fourth and final college.
15.	October, 1976	Notice from underwriter of a 146% rate increase.
16.	Oct. 1976-Jan. 1977	Search for new carrier.
17.	Feb. 1, 1977	Inauguration of identical coverage at lowest cost available.

*Major steps in our progress; note the 11-month time frame.

3/77

Claudette Dwyer, Executive Director
Council of West Suburban Colleges

Council of West Suburban Colleges Box 471 Lisle, Illinois 60532 (312) 971-0960

Appendix II

CONSOLIDATED EMPLOYEE BENEFIT INSURANCE

The Council of West Suburban Colleges' Life Insurance and Accidental Death and Dismemberment Plan, established on December 1, 1974, and the Health Insurance contract, established on March 1, 1975, are among the most impressive illustrations of cost-effectiveness and economy through cooperation in our experience.

The following figures document claims paid and savings realized, based upon previous premiums minus jointly purchased premiums, minus self-funded claims. The figures are based upon the census immediately before the effective dates of the plan. The projected savings figures assume that the previous employee contribution level was maintained. One participating college is not a member of the Council but a neighbor. One Council member does not participate in the plan.

CLAIMS PAID AND SAVINGS REALIZED

College A

Paid claims (8 mos.)	$22,147.
12 month savings	16,821.

College B

Paid claims (3 mos.)	4,034.
12 month savings	9,631.

College C

Paid claims (8 mos.)	$62,419.
12 month savings	73,000.

College D

Paid claims (8 mos.)	$44,723.
12 month savings	9,832.

SUMMARY

Paid claims at 8/1/76 $133,323.

7/11/77

CD

Aurora College George Williams College Illinois Benedictine College North Central Colleg

Appendix III

For information, contact
Claudette Dwyer
Council of West Suburban Colleges
Box 471, Lisle, IL 60532
(312) 971-0960

JOINT PURCHASE OF EMPLOYEE BENEFIT INSURANCE
Six Month Report
Feb. 1-July 31,1977

	COLLEGE A	COLLEGE B	COLLEGE C	COLLEGE D
6 Month Premium if not Self-Insured	$78,384	$62,040	$46,644	$53,046
6 Month Premium $1,000 Deductible (self-insured)	$37,914	$32,370	$22,302	$25,692
6 Month Paid Claims	$22,906	$22,869	$17,801	$11,927
Savings	$17,564	$ 6,801	$ 6,541	$15,427

Total Savings -- $46,333

Consortium: Associated Colleges of the Twin Cities

Title of Program: Cooperative Purchasing

Participating Institutions:

Augsburg College
The College of St. Catherine
College of St. Thomas
Hamline University
Macalester College

Program Administrator: Mr. William B. Adams, Business Coordinator, Associated Colleges of the Twin Cities, cooperating with various campus officials. At the inception of the cooperative purchasing effort at ACTC, Andrew E.Helmich was Executive Director. He since has left and his replacement, Birgit Burkland, is due to start in the summer of 1979.

A. Brief History

William B. Adams was employed on October 12, 1977, on a half-time basis, as Business Coordinator of the Associated Colleges of the Twin Cities, a five-college consortium in Minneapolis-St. Paul. The Consortium itself was founded in 1972 and incorporated in 1975, with funding provided until recently by foundation grants. ACTC's purpose is to serve as agent for the five independent, church-related colleges in cooperative matters and deal with program enrichment and operational economies.

1. Objective

The specific objective of the effort was to "achieve cost savings for member institutions by obtaining maximum purchasing power through standardization of materials requests and related volume buying at acceptable levels of quality and service."

2. Description

The cooperative purchasing effort at ACTC was established following a carefully planned approach described in Attachment I, "Model for Implementation of ACTC Joint Purchasing". The results of the first year's purchasing operations are described in Attachment II, a memorandum to the ACTC Board of Directors by its Business Coordinator.

In essence these documents describe the establishment of a User Committee of purchasing agents, which would collect information to start cooperative purchasing and then make the decisions which would accomplish it. A part-time Business Coordinator was to be hired to coordinate the efforts.

The first products purchased were paper towels, toilet tissue and plastic bags; bond and xerographic paper; light bulbs; and fertilizer. In addition, the group developed cooperative programs in bulk mailing handling and mail processing.

B. Costs

Exact costs of the operation are not easy to quantify, but it would appear that they could not have totalled as much as $10,000 at the time Adams wrote the summary of the first year's operations. This would include his salary and a generous estimate of operating expenses to maintain the business segment of the ACTC offices. The Consortium was supported during this time by foundation money.

C. Benefits

Adams quantified savings at the time (April 1978) as amounting to $22,437. In a summary prepared six months later (August 1978), he estimated savings as totaling $42,373 as of that time.

The User Committee believed that actual savings through cooperative purchasing were considerably greater than these figures represented.

Additional savings were accomplished for the following reasons:

- Standardization of materials had occurred in an institution which allows for greater volume purchasing;
- Lower priced materials of comparable quality had been found through competitive bidding, to replace previously purchased items;
- Volume purchasing had replaced previous patterns of small lot purchasing, greatly lowering the per unit cost.

An interesting exchange of correspondence is included, dealing with the ACTC purchase of light bulbs from Muska Lighting in St. Paul, as Attachment 3a and 3b. 3a is the letter accepting the bid, a restatement of the terms of the bid, and a formal agreement by the appropriate campus officials to purchase under its terms. 3b is a letter from the vendor quantifying the savings realized from the inception of the contract in February, through December. The vendor indicates what direct price savings had been realized ($1772, which is as much as can be claimed legitimately in a study of this kind) and then goes on to describe other savings. He had met with the purchasing agents, he said, to introduce them to new energy savings products. Their purchases of these improved products saved them 17 or 18 times as much as the lower prices they realized through volume purchasing! These figures may be accepted as permissible salesman's exaggerations, but they are based on arithmetic he would defend vigorously. Precise or not, they are one measure of the savings to be realized from improved purchasing practices which can be stimulated by cooperative purchasing.

D. Validation Procedures

Adams' memorandum to the ACTC Board of Directors, Attachment II, is based on figures provided at, and scrutinized by, the User Committee of purchasing agents.

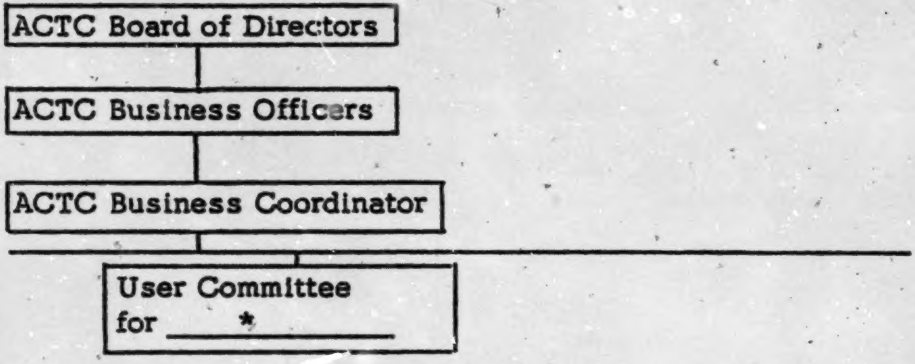
Attachment I

MODEL FOR IMPLEMENTATION OF ACTC JOINT PURCHASING

I. OBJECTIVE

To achieve cost savings for the member institutions by obtaining maximum purchasing power through standardization of materials requests and related volume buying at acceptable levels of quality and service.

II. PARTICIPANTS



*The five-college purchasing agents would form the core membership. Additional expertise would be drawn from the campuses depending on the materials group under discussion.

III. IMPLEMENTATION PHASES

Phase One

A. Collect evidence of cost savings through volume purchasing in a select number of materials groups (chosen to insure immediate, visible success). See Attachment #1 prepared by J. B. Knuesel.

B. Design a structure to service joint purchasing. See Attachment #2 prepared by J. D. Rognlie, J. B. Knuesel, and A. E. Helmich.

C. Present these recommendations to the ACTC Board of Directors.

Phase Two

Effect the decision of the ACTC Board using the ACTC Executive Director as an interim coordinator of the user committee.

Phase Three

Hire a part-time Business Coordinator to assume responsibility for the joint purchasing procedures.

2115 Summit Avenue
125 O'Shaughnessy Educational Center
Saint Paul, Minnesota 55105
(612) 647-5810

MEMORANDUM April 27, 1978

TO: Members of the ACTC Board of Directors

FROM: Bill Adams, ACTC Business Coordinator

During the first year of operation, the ACTC Joint Purchasing Program has saved $10,537 through purchasing and has completed purchase agreements and support service integration which will save the colleges an additional $11,880, for a total savings of $22,437 as follows:

Joint Purchasing Savings in Hand	AUG	HAM	MAC	CSC	CST	TOTAL
Paper towels, toilet tissue, plastic bags (2-77)	$ 413	$ 612	$ 661	$1,582	$ 716	$ 3,984
Bond and xerographic paper (4-77)	5	220	77	168	14	484
Light bulbs (2-77 to 2-78)	492	529	324	481	459	2,285
Paper towels, toilet tissue, plastic bags (11-77)	144	888	683	1,098	700	3,513
Fertilizer (2-78)	No Purchase	163	102	No Purchase	6	271
Total	$1,054	$2,412	$1,847	$3,335	$1,889	$10,537
Joint Purchasing Savings Projected						
Bond and xerographic paper (3-78 to 3-79)	240	770	790	1,000	No Purchase	2,800
Light bulbs (2-78 to 2-79)	490	530	320	490	470	2,300
Total Purchasing	$1,784	$3,712	$2,957	$4,825	$2,359	$15,637
Support Service Integration Savings Projected						
Bulk mail hauling (1-78 to 1-79)	N.A.	N.A.	3,000	N.A.	*	3,000
Bulk mail processing (4-78 to 4-79)	1,300	2,500	N.A.	N.A.	*	3,800
Total Purchasing and Support Service Integration	$3,084	$6,212	$5,957	$4,825	$2,359	$22,437

*Savings undetermined at present

By combining purchase volumes to obtain a lower per unit cost, the ACTC has experienced an average of 9% savings in purchase agreements which have been completed.

By integrating the support service of bulk mail processing, the colleges are saving almost 50% based on previous costs. Further cost savings occur for the consortium member who is now processing the bulk mail due to an increased volume which helps to meet costs of a fixed overhead.

At present, work is being completed in several areas which will result in further dollar savings, as follows:

1. Joint purchase of paint
2. Joint purchase of custodial supplies
3. Contractual agreement for roof repair

A further agreement recently has been reached for a joint purchase of specialized equipment for roof maintenance which will enable each college to significantly lower the costs for roof maintenance, to better assess its roof repair needs, and to make more accurate budget projections.

In addition, data collection has begun to determine the potential for savings in

1. Glass replacement
2. Plumbing and electrical repair
3. Elevator maintenance

Work in these areas is expected to be completed by June 30, when the present half-time position of business coordinator expires.

While savings of $22,417 has been accounted for, the actual savings is considerably greater, as is reflected in the ACTC Joint Purchasing User Committee minutes of December 6, 1977.

> "It was agreed that additional savings had occurred for the following reasons:
>
> a. Standardization of materials has occurred within an institution which allows for greater volume purchasing.
>
> b. Lower priced materials with comparable quality to replace previously purchased items have been found through the competitive bidding.
>
> c. Volume purchasing has replaced previous patterns of small lot purchasing, greatly lowering the per unit cost."

In addition to hard dollar cost savings, the ACTC Joint Purchasing Program provides further cost benefits to the colleges. The program serves as a forum for administrators who occupy similar positions to meet for an exchange of information and ideas. It provides the opportunity to capitalize on the collective experience and expertise available within the consortium rather than to independently attempt solutions to similar problems. This type of ongoing, professional forum will continue to effectuate economies and achieve greater efficiency as the colleges further identify their strengths and weaknesses, and make the most effective use of their human and fiscal resources.

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ADDENDUM 4

ASSOCIATED COLLEGES OF THE TWIN CITIES
1488 Englewood Avenue
St. Paul, Minnesota 55104
(612) 644-5044

February 2, 1977

Mr. Dennis W. Anderson
Muska Lighting
700 Grand Avenue
Saint Paul, Minnesota 55105

Dear Mr. Anderson:

The Purchasing Agents of the Associated Colleges of the Twin Cities accept your quotation of January 20, 1977 for the purchase of light bulbs.

It is agreed that each member college (Augsburg, Hamline, Macalester, St. Catherine, and St. Thomas) will purchase all of their light bulbs (excluding high intensity, specialized photography, and special purpose light bulbs) from Muska Lighting for a period of one year effective February 1, 1977. Each institution is aware of the following terms:

1. 50% base discount on all items in your catalog. Terms: 1-10 net 30.

2. If an institution purchases less than ten standard cases, delivery charges will be added.

3. If an institution purchases between twenty-five and forty-nine standard cases, a 51.5% discount will apply. Terms: 1-10 second month net 60.

4. If an institution purchases fifty standard cases or more, a 53% discount will apply. Terms: 1-10 second month net 60.

5. Purchase of ballasts at a 45% discount may be included for standard case totals.

Augsburg College Hamline University Macalester College
College of St. Catherine College of St Thomas

This letter can be construed by you as a binding agreement between Muska Lighting and the five ACTC member institutions for the period cited above. Upon its expiration, this agreement will be reviewed by both parties prior to establishing a further agreement.

To insure adequate invoicing procedures, we the Purchasing Agents at each of the member institutions will continue to send purchase orders directly to you.

Andrew E. Helmich

Andrew E. Helmich
Executive Director, ACTC

Robert J. Lewis

Robert J. Lewis
Custodian & Services Supervisor
Physical Plant, Macalester College

Eugene Ecklund

Eugene Ecklund
Director, Physical Plant &
Purchasing, Augsburg College

Calvin Debuhr
Director, Physical Plant
The College of St. Catherine

Jerome Knuesel
Director, Purchasing & Personnel
Hamline University

Franklin L. Weides

Franklin L. Weides
Purchasing Agent
College of St. Thomas

ADDENDUM 3

MUSKA lighting center
700 GRAND AVENUE, SAINT PAUL, MINNESOTA 55105 • PHONE (612) 227-8881
THE BEST SOURCE OF LIGHT
UNDER THE SUN

December 16, 1977

DEC 19 1977

Associated Colleges
1488 Englewood
St. Paul, Mn 55104

ATTN: Mr. Bill Adams

Dear Bill:

My apologies for taking so long in getting this to you, but to insure the best accuracy I have manually totaled your purchases for the five colleges since February 1, 1977 on an order by order basis since the cost varies depending on the size of the order. Total expenditures to date have been $25,162 and under the previous separate purchasing would have been $26,934 for a savings of $1772 or an additional 7%.

At the beginning of the contract period we held a meeting with the five members introducing them to the energy saving products available for their use. Each member has utilized these new products for some very outstanding additional savings. The group has purchased, to date, 504 low wattage eight foot fluorescent lamps which over average life @$.04/KWH *will save $4,234.00 and 5184 four foot tubes which over their average life @$.04/KWH *will save $29,030 for a total savings of $33,264, or 132% of the total expenditure for all types combined.

I hope to be on your agenda for the next meeting and show the new thriftmate announced last September and available now.

Sincerely,

Dennis A. Anderson

Dennis W. Anderson
Lamp Department Manager

* Allowing very little for increasing energy cost as this figure can realistically double before many of these tubes have burned out.

Consortium: Hudson-Mohawk Association of Colleges & Universities

Title of Program: Cooperative Surplus Equipment Sale

Participating Institutions:

- Albany College of Pharmacy
- Albany Medical College
- Hudson Valley Community College
- Rensselaer Institute of Technology

Program Administrator: Ms. Jane Gorzelnik, Director of Purchasing Services, Hudson Valley Community College, Mr. Robert M. Briber, Executive Director, Hudson-Mohawk Association of Colleges & Universities, cooperating with other Purchasing Officials.

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A. Brief History

As an outgrowth of its efforts in cooperative purchasing, the group of purchasing officers supervising their cooperative efforts decided to run a cooperative surplus equipment auction. Each of the colleges, they reasoned, had a problem with equipment which no longer served a useful purpose but which might bring the campus some cash if it could be sold.

1. Objective

The group decided, therefore, to collect and auction off as much material as it could gather together in order to raise cash, to rid the campus of the clutter of unused but still useful equipment, and to further their cooperative efforts.

2. Description

The first step required was to establish interest among the campuses. So the purchasing agents were asked if they would participate. Several said they would; thus, the group searched for and identified an auctioneer who would help them organize the sale. A date and place were chosen.

After considerable on-campus effort by involved purchasing agents and business officers (particularly at the Albany College of Pharmacy and the Hudson Valley Community College, which was most interested and had agreed to be host), a variety of material was identified.

Space for the auction was set aside, and the process of accumulating material began. Each piece was tagged so it could be identified by the owning campus when sold, and lists of the major items were prepared both for record purposes and to help produce effective newspaper advertisements.

Ads were placed in several local newspapers (Attachment I) and a flier was mimeographed (Attachment II). Several hundred copies were distributed to contacts provided by the auctioneer and other names suggested by participants in the preparation.

After a slow start on the first day of the auction (while operating procedures were worked out to bring a steady stream of material to the auctioneer and accurate recording procedures were established), the auction proceeded smoothly. After two hours of auctioneering, however, it was clear that one day was not going to be enough time. Too much material would remain to be sold.

The group decided on the spot to run the auction a second day, six days later, and announced the decision to the crowd. The auction continued until 2:30 p.m. and then began again as a new auction six days later. New ads had been placed and a new flier distributed. By the end of the second day, most of the material had been sold. What was not sold was discarded or returned. Two large items which had been identified at the auction but had not been sold were sold a few days later.

In all, about 150 bidders attended on one or both days. No bad checks were received, and the bulk of the equipment was sold.

B. Costs

Attachment III details the costs and the financial benefits of the auction. About $14,000 was realized from the sale, which cost $1,550 to run, including the auctioneer's cut (7%) and expenses incurred by Hudson-Mohawk Association for advertisements and other purchases.

C. Benefits

The participating colleges realized income from the sale of their no longer useful material. The host college, which sold most of the material, realized over $10,000 in cash. The Albany College of Pharmacy, which sold quantities of derelict classroom material (old balances, for example, were great favorites), realized $2,000.

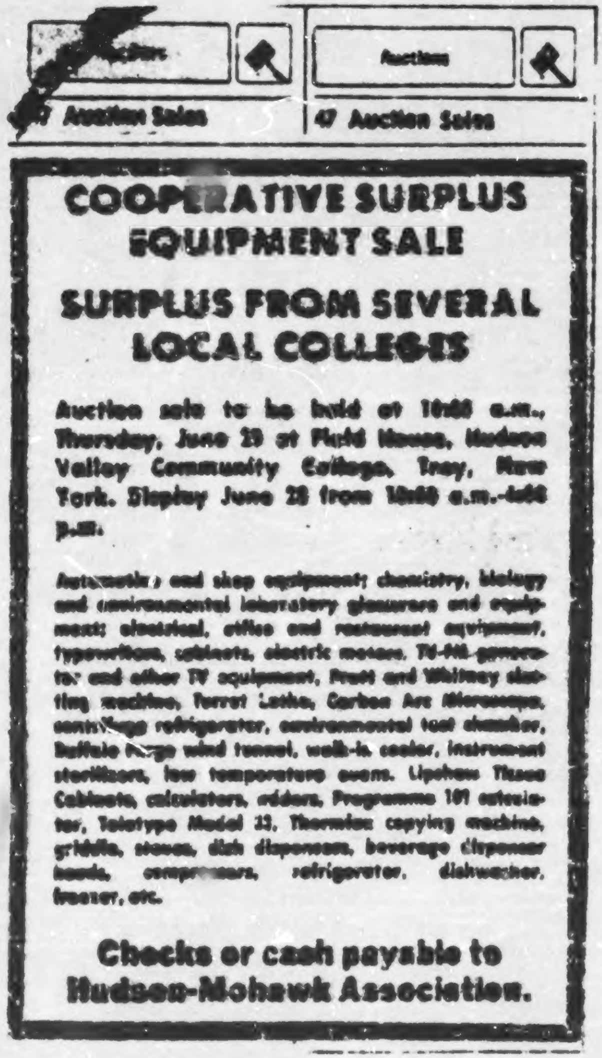
The colleges also were able to rid themselves of dust-collecting, space-filling "junk".

The auction itself was fun for all involved.

D. Validation

Perhaps the best validation of this report were the checks for $10,173,89, $2,198.05, $84.45 and $8.89 which went to the participating colleges.

Attachment I



Auctions

47 Auction Sales

Auctions

47 Auction Sales

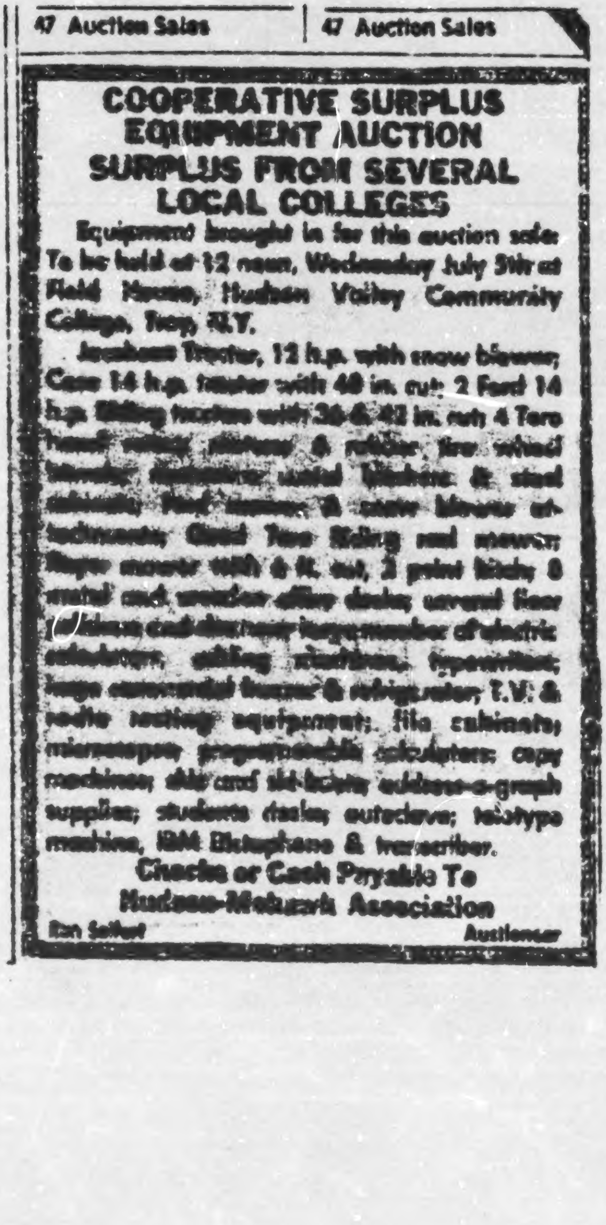
COOPERATIVE SURPLUS EQUIPMENT SALE

SURPLUS FROM SEVERAL LOCAL COLLEGES

Auction sale to be held at 10:00 a.m., Thursday, June 29 at Field House, Hudson Valley Community College, Troy, New York. Display June 28 from 10:00 a.m.-4:00 p.m.

Automotive and shop equipment; chemistry, biology and environmental laboratory glassware and equipment; electrical, office and restaurant equipment, typewriters, cabinets, electric motors, TV-FM-generator and other TV equipment, Pratt and Whitney slotting machine, Turret Lathe, Carbon Arc Microscope, centrifuge refrigerator, environmental test chamber, Buffalo Forge wind tunnel, walk-in cooler, instrument sterilizers, low temperature ovens. Lipshaw Tissue Cabinets, calculators, adders, Programma 101 calculator, Teletype Model 33, Thermofax copying machine, griddle, stoves, dish dispensers, beverage dispenser heads, compressors, refrigerator, dishwasher, freezer, etc.

Checks or cash payable to Hudson-Mohawk Association.



47 Auction Sales

47 Auction Sales

COOPERATIVE SURPLUS EQUIPMENT AUCTION SURPLUS FROM SEVERAL LOCAL COLLEGES

Equipment brought in for this auction sale: To be held at 12 noon, Wednesday July 5th at Field House, Hudson Valley Community College, Troy, N.Y.

Jacobsen Tractor, 12 h.p. with snow blower; Case 14 h.p. tractor with 48 in. cut; 2 Ford 14 h.p. Riding tractors with 36 & 42 in. cut; 4 Toro hand [illegible] mowers & rotor [illegible] wheel [illegible] [illegible] [illegible] & steel [illegible]; [illegible] [illegible] & snow blower attachments; [illegible] Toro Riding reel mower; [illegible] mower with 6 ft. cut, 3 point hitch; 8 metal and wooden office desks; several floor [illegible] and [illegible] large number of electric calculators, adding machines, typewriters; large commercial freezer & refrigerator; T.V. & radio teaching equipment; file cabinets; microscopes; programmable calculators; copy machines; slide and [illegible] address-o-graph supplies; students desks; autoclave; teletype machine, IBM Dictaphone & transcriber.

Checks or Cash Payable To Hudson-Mohawk Association

Ron Seifert Auctioneer

HUDSON-MOHAWK
ASSOCIATION OF
COLLEGES & UNIVERSITIES

Attachment II

Albany College of Pharmacy
Albany Law School
Albany Medical College
The College of Saint Rose
Empire State College
Hudson Valley Community College
Junior College of Albany
Maria College
Rensselaer Polytechnic Institute
Russell Sage College
Schenectady County Community College
Siena College
Skidmore College
State University of New York at Albany
Union College

COOPERATIVE SURPLUS EQUIPMENT SALE

- SURPLUS FROM SEVERAL LOCAL COLLEGES -

EQUIPMENT BROUGHT IN FOR THIS AUCTION. . . AUCTION TO BE HELD ON WEDNESDAY, JULY 5 AT 12:00 NOON, AT HUDSON VALLEY COMMUNITY COLLEGE, TROY, N.Y.

Listed below are some of the items that will be available for bid. Cash and checks made payable to "Hudson-Mohawk Association" only. Ron Seifert, Auctioneer.

Addressograph supplies
Autoclave
Case 14 h.p. tractor w/48 in. cut
Large commercial freezer & refrigerator
Copy machines
Large number of electric calculators, adding machines, typewriters
File cabinets
Flayer mower w/6 ft. cut, 3 point hitch
Several floor polishers & cleaners
2 Ford 14 h.p. riding tractors with 36 & 42 in. cut
Ford Mower & snow blower attachments
IBM dictator & transcriber
Jacobson tractor 12 h.p. w/snow blower
Numerous metal lockers & steel cabinets
8 Metal & wooden office desks
Microscopes
Programmable calculators
4 Rubber tire wheelbarrows
Stencil cabinet
Student desks
Teletype machine
TV & radio testing equipment
4 Toro hand rotary mowers
Good Toro riding reel mower

. . . and much more . . .

****

This equipment has been gathered specifically for this auction from several area colleges. The auction will commence at 12 Noon on Wednesday, July 5. For further information contact Robert Briber, Hudson-Mohawk Association of Colleges & Universities (785-3219) or Jane Gorzelnik, Director of Purchasing Services, Hudson Valley Community College (283-1100).

Offices: [illegible] NEW LOUDON ROAD (ROUTE 9), LATHAM, NEW YORK 12110 TELEPHONE: (518) 785-3219

Attachment III

7/21/78

I. INCOME

Income from auction	$12,756.50
Additional income after auction	1,260.00
Total Income	$14,016.50

II. EXPENSES

Newspaper ads - copies attached		
Times Union	$128.00	
	128.00	
	112.00	
Times Record	$ 61.60	
	61.60	
	61.60	$ 552.80
Auctioneer (7% of sales at actual auction - $12,756.50 - as agreed)		892.96
Bob Ciborowski services		50.00
Postage		
Miscellaneous	$ 1.00	
216 Bulk Mail	5.16	
267 1st Class	40.05	
		46.21
Mimeograph (700 fliers - copy attached)		4.25
Photographs of auction		5.00
Total Expenses		$ 1,551.22

III. REIMBURSEMENT

To participating colleges		
HVCC	$10,173.89	
ACP	2,198.05	
RPI	84.45	
AMC	8.89	
		12,465.28
Other reimbursement		
HMACU	608.26	
Auctioneer	892.96	
Bob Ciborowski	50.00	
		1,551.22
Total reimbursement		$14,016.50

CHAPTER VI

COOPERATIVE NON-TRADITIONAL HIGHER EDUCATION ORGANIZATIONAL STRUCTURES AND DISTANCE LEARNING SYSTEMS

CHAPTER VI

Introduction

A. Overview

Winston Churchill's perceptive description of Russia, "A riddle wrapped in a mystery in an enigma," would apply equally well to a unique organizational structure in higher education, the consortium. Although a trend is only beginning to emerge, an increasing number of cooperative higher education ventures, especially in the non-traditional area, have developed in the past decade.

A growing conservatism on the part of taxpayers and public officials, which began in the late 1960s has led to increasing interest in examples of cost effective delivery systems that may be transported to any region in the country. Almost everyone now seems to be talking about the efficient use of existing financial, physical and human resources, the elimination of unnecessary duplication, and the maximization of access and services to learners.

It is not altogether certain that this chapter has been correctly titled. The case studies included herein deal with distance learning (Coastline), off-campus library arrangements (Coastline), shared facilities (Auraria), a contractual mechanism for purchasing instruction and services from several institutions (John Wood), and off-campus learning centers organized to serve geographically distant students (York County and Mid-Coast). Additionally, a variety of other structures that deal with open learning, distance learning, non-campus colleges, or brokering concepts are closely related. The only term that seems to span the range of these diverse examples and to convey both the extent to which they deviate from the customary structure and approach of higher education and to indicate the one attribute they all have in common, is "non-traditional."

B. Non-Campus Colleges

Across the United States, there are dozens of examples of non-campus colleges, outreach programs, and satellite campuses. John Lombardi, in his booklet Noncampus Colleges: New Governance Patterns for Outreach Programs (Eric Clearinghouse for Junior Colleges, Topical Paper No. 60, March, 1977), dis-discusses seven postsecondary noncampus colleges. The oldest of these is Whatcom Community College in the State of Washington, founded in 1970. In order of founding, the others are the Community College of Vermont (1971), Peralta College for Non-Traditional Study in California (1974), Chicago City-Wide College and Chicago Urban Skills Institute (1975), and in 1976, Pioneer Community College in Kansas City, Missouri, Coastline Community College in California, and the Los Angeles Office for New Dimensions.

Added to these institutions identified by Lombardi are several other noncampus colleges. Hudson County Community College Commission in New Jersey and

Wor-Wic Technical Institute in Maryland are noncampus colleges similar in their operation to John Wood Community College.

In addition, there are extensions of central campuses which serve as branches, satellites or learning centers, with York County Community College Services and Mid-Coast Community College Services in Maine as examples. Pennsylvania State University, Dallas Community College District, and Miami-Dade Community College are other examples of this type of outreach activity.

C. Distance Learning Systems

Just as non-campus colleges have made it possible to provide educational opportunities for those who cannot or do not wish to travel to a central campus, new educational delivery systems have made it possible to provide instruction for audiences removed from any formal classroom setting.

The first national overview of telecourse consortia is contained in a two-part article by Ronald Gross titled "The Other Open University," in Planning for Higher Education, VII (August, 1978), pp. 9-19, 25-36. Part I of the article discusses the producers of telecourses and the educational and financial motives which encourage them to form consortia. Part II describes how colleges have joined together "in a kind of grassroots cooperative movement to buy, make use of, and increasingly to shape these new instructional packages."

What are the benefits of cooperating? Gross indicates that the two major benefits for members are the cost effectiveness inherent in jointly obtaining telecourses and the opportunity for increasing enrollments (p. 27).

Included in Gross' pioneering article is advice on the "Process for Design of a Telecourse" (pp. 13-14) and a list of the most common mistakes made by colleges using telecourses for the first time (p. 35).

An equally valuable series of articles on telecommunications, appearing in the same journal, were written by Ralph Lee Smith. Titled "A Telecommunications Primer for College Presidents," four articles trace the background and development of communications technology and the implications for the future (Part I, Vol. VII (December, 1978), pp. 7-11, 16-23; Part II, Vol. VII (February, 1978), pp. 7-13, 21-26).

The case study in this report on Coastline Community College analyzes the production, marketing, and instructional aspects of telecourses. Other examples of distance learning systems would include the following.

In the area of production and national marketing, the University of Mid-America (UMA) in Lincoln, Nebraska, is one of the better known consortia nationally. Organized in 1971, UMA spans seven states and has eleven members: the Universities of Nebraska, Iowa, Iowa State, Kansas, Kansas State, Minnesota, Missouri, North Dakota, North Dakota State, South Dakota, and South Dakota State. UMA does not offer either credit or degrees; its primary functions are planning, production, distribution of telecourses, and fund-raising.

Also significantly involved in the production, distribution and use of telecourses are: Dallas County Community College District; Chicago's T.V. College; Coast Community College District in California; Tarrant County Junior College District in Texas; Miami-Dade Community College in Florida; Central Piedmont Community College in North Carolina; City Colleges of Chicago; Lane Community College in Oregon; and The Metropolitan Community Colleges in Kansas City, Missouri. These institutions, and others, have been or are involved in a variety of cooperative arrangements designed to strengthen their distance learning systems.

On the local and regional level, there are several examples of successful and developing consortia. The Southern California Consortium for Community College Television, formed in 1970, has 35 member institutions from six southern California counties. It was established to provide televised courses for college credit. The California Instructional Television Consortium, formed in 1971, is based at California State College, Sonoma. Its members include the 19 offices of Extended Education of the California State University and Colleges, the Statewide Office of Extended Education, and The Extended Education Commission. The Consortium produced a number of courses in its first four years but recently has concentrated on delivering education through all types of media including video cassettes, telephone, radio, audio cassettes, and computers. It provides workshops on marketing for extended education staffs and offers broadcast television courses on a selected basis.

In New Jersey, two community college television consortia were formed in 1978 to deliver vocational courses via cable television. All the community colleges and virtually all the cable companies in the state are involved in this impressive experiment. Their goal is to deliver credit courses, whether leased, purchased or produced, throughout the day and evening on dedicated cable channels.

D. Observations

Non-traditional educational consortia and cooperative arrangements, like non-traditional institutions, are a relatively recent development in higher education. They have emerged because they meet needs and enable activities that could not be accomplished as well or at all unless new structures were created.

In the past, colleges and universities have not been noted for giving priority interest to interinstitutional cooperation. Where substantive cooperation has occurred and worked, it has usually resulted from financial and academic interests which could not be addressed by individual institutions.

The case studies presented in this report are not the only examples that could have been used. However, the cooperative arrangements described are representative of similar activities taking place in other parts of the nation.

The institutions involved in these case studies devoted considerable time and effort to gathering the data that were used. Since there was no model available, to access the costs and benefits of non-traditional cooperative systems, each case had to be developed based on the best comparative data that could be assembled.

Finally, these initial studies suggest that there are significant benefits to cooperative higher education undertakings, not the least of which is their cost effectiveness. Although a prototype non-traditional, cost effective cooperative delivery system was not designed as a result of this study, there are certainly enough examples of the alternative ways to develop and deliver learning to citizens to whet one's interest in the literally hundreds of other cooperative arrangements that were not studied. They remain the basis for a more extensive monograph.

Cooperative Arrangement: John Wood Community College

Title of Program: John Wood Community College

Participating Institutions:

- John Wood Community College
- Culver-Stockton College
- Gem City College,
- Hannibal-LaGrange College
- Quincy Beauty Academy
- Quincy College
- Quincy Technical Schools
- Southeastern Community College

Administrator:

Dr. Paul R. Heath, President, John Wood Community College

A. Educational Programs

John Wood Community College (JWCC) was designed to implement an innovative educational approach called the contractual "common market," a delivery system which makes use of existing resources to provide educational programs and services.

A non-campus college based in Quincy, Illinois, John Wood was initiated with the election of a board in 1974 and held its first classes in the Fall of 1975. Two major thrusts in a master plan for higher education in the state, developed by the Illinois Board of Higher Education, contributed to the unique nature of the college. Phase I of the master plan, released in 1964, set up the mechanism for a community college system that would blanket the state. In 1971, Phase III of the master plan was released, which strongly encouraged the common market concept. Within the framework, the local board of trustees and the college staff developed unique systems for providing instruction that would be cost effective.

Since its inception, a primary aim of John Wood has been to provide comprehensive, high-quality postsecondary education at a low cost to residents of Community College District 539. Given the multiplicity of educational institutions already existing in the District and surrounding area, the common market approach was the most logical.

Of the thirty-nine community college districts which cover about 99% of the State of Illinois, only John Wood has used the common market concept on a comprehensive basis. Students are admitted and enrolled through JWCC, paying the low community college rate. They attend classes and participate in out-of-class activities at contracting institutions, and in some instances even live on the campus of another institution. John Wood itself has no traditional campus, and employs only fifteen instructional personnel to teach classes which supplement available programs.

Students can select courses from seven existing institutions with which John Wood has contractual arrangements: Culver-Stockton College in Canton, Missouri; Quincy College, Gem City College, Quincy Beauty Academy and Quincy Technical Schools, all in Quincy; Southeastern Community College in Keokuk, Iowa, and Hannibal-LaGrange College in Hannibal, Missouri. This broad geographical dispersion of services makes an education through John Wood readily accessible to all residents of the district.

The students are considered consumers of educational goods and services, free to select their courses from the institution (or in some cases, institutions) which best meet their needs.John Wood serves a large geographical area covering 1,823 square miles, with a population of about 90,000. The average student age is 29. This past year the college generated nearly 43,000 semester credit hours and had a head count of over 3,600.

Studies conducted since 1975 show that John Wood is fulfilling an important educational need in the area. Over 70% of the students surveyed each year stated that they would have gone to school outside the District, or would not have gone to school at all, if it were not for John Wood.

In terms of total offerings, JWCC can offer its students a choice of over 60 areas of concentration; 28 for baccalaureate transfer and 37 in occupational curricula. The occupational curricula are remarkably diverse for a college of this size, including Accounting, Agri-Business Management, Air Conditioning, Auto Body Repair, Auto Mechanics, Cosmetology, Drafting and Design, Fashion Merchandising, Horology, Law Enforcement, Machine Tool Operation, Practical Nursing, Secretarial Science, Broadcast Technology, Swine Confinement, and Welding.

1. Major Cost Effective Measures

a. Physical Plant

One of the more significant cost savings is realized by eliminating the need for constructing a large physical plant. John Wood has leased space (31,268 sq. ft.) for administrative offices, classrooms, and a library from a Catholic seminary which has available space due to enrollment shortfalls. The lease of space has the additional advantage that no district funds go to support bonds.

b. Library Collection

Regardless of where they are taking classes, JWCC students may use the library facilities of any common market college, representing combined library holdings of over 300,000 volumes. Conversely, John Wood's collection of holdings in specialized areas is open to students from other contracting institutions.

c. Faculty

Most of the instruction, especially in the baccalaureate-oriented programs, is done in conjunction with the cooperating liberal arts colleges. John Wood students attend the regular classes of the colleges' lower division courses. Consequently, a high-quality faculty is available to the student, without John Wood's developing an extensive faculty of its own. Programs were created at JWCC only to supplement the offerings of contracting institutions. The college has its own programs in agriculture, nursing, broadcast technology, and machine tool operation.

2. Distinctive Programs

Several John Wood programs approach educational needs in innovative ways which are also cost effective.

a. Open Learning Center

The Open Learning Center provides self-paced, personalized instruction for students who need flexibility in scheduling their courses or who benefit from a mastery learning approach to instruction. Prospective students meet with the Center Director to determine a time frame for the course and a weekly instruction schedule. Utilizing an open-entry, open-exit structure, all coursework in the Open Learning Center is done on a one-to-one basis with an Open Learning Center instructor. Although "non-traditional" courses are typically more costly than traditional lecture courses, the Center has reduced staffing costs by developing a master teacher model in which a small core of full-time instructional personnel oversee a staff of part-time instructors. A wide range of courses, from freshman composition to college algebra to accounting, are offered at the Center. In addition, there is an adult education program which offers developmental courses in reading, basic mathematics, communication skills, etc., and provides preparation for the GED test. A tutoring service also is available at the Open Learning Center, for students who need assistance with traditional courses. Because of the success of the Open Learning Center, a satellite center has been opened in Pittsfield, a city which has the largest population base outside of Quincy. The Pittsfield Center opened in July and already has enrolled 50 students.

b. Project Outreach

John Wood provides education to outlying areas through Project Outreach. Utilizing the facilities of area high schools, the college offers courses on a continuing basis in seven communities in the District. In each community, a center coordinator has been identified to help determine local needs and to coordinate the college's activities in that area. Both credit and non-credit courses are offered. Information on the types of courses desired is garnered from questionnaires and local advisory committees so that offerings reflect the educational needs of the area.

c. Agriculture Research Center

A good example of a cooperative response to educational needs is the Agriculture Research and Demonstration Center being developed jointly by John Wood and the University of Illinois. Agriculture, including farming and the constellation of agri-businesses which support it, is one of the college district's primary industries. Understandably, John Wood's agriculture program has exhibited steady growth, and the need for facilities to provide "hands on" experience has become apparent. Rather than expending large sums to build a facility solely for its own students, John Wood entered into an agreement with the University of Illinois to submit a joint budget request to fund construction of a facility designed for joint occupancy. The two institutions will share not only the building costs, but also the cost of staffing, equipment, utilities,and maintenance. In addition, a library of agriculture materials will be developed utilizing the resources of both schools. Savings in terms of facility costs and avoidance of duplicated services will be significant.

d. Broadcast Technology

The new broadcast technology course at JWCC will make use of existing resources in local industry to offer John Wood students a quality program without large outlays for sophisticated equipment and highly trained specialists. Most of the equipment and the personnel already are available at Harris Corporation, an international company with a broadcast electronics division in Quincy. Harris will supply instructors from their staff, and will make industry-related workshops and seminars available to students in the program. There is a great demand for broadcast technologists, and the program already has generated considerable interest among people in the industry. John Wood, thus, is responding to a need for specially-educated manpower, while operationalizing a highly specialized course in a cost-effective way.

B. Financial Profile

1. Net Instructional Cost (FY 1978)

Each year, the Illinois Community College Board (ICCB) calculates Net Instructional Cost Per Credit Hour (NICCH) for Illinois community colleges. Their data indicate clearly that JWCC is making very effective use of its allocated dollars and that the institution is becoming more cost effective as its enrollment increases.

Net Instructional Cost, often simply called the "unit cost," is defined in the ICCB Unit Cost Study Manual as follows:

> (The NET Instructional Cost) is the cost used in the state funding formula, as well as for most comparative analyses. Net Instructional Cost includes only actual operating expenditures for the instructional area. These expenditures include teaching salaries, direct departmental cost, an allocated proportion of the support costs and overhead, and building rental costs.

An analysis of the most recent Net Instructional Cost figures available at the time of this writing (figures for FY 1978) reveals that the JWCC operation is very cost effective in comparison with other community colleges in Illinois.

The FY 1978 credit hour production of the 39 community colleges in Illinois ranged from a low of 26,400 to a high of 1,616,472. The median credit hour production was 63,400. JWCC had a total of 39,825 credit hours in FY 1978.

The Net Instructional Cost figures for the 39 community colleges ranged from a low of $44.11 to a high of $114.03. The statewide mean average was $57.30, and the median was $60.97. The JWCC FY 1978 Net Instructional Cost was $54.90; this figure was the eighth lowest of all community colleges in Illinois.

Further indications of the cost effectiveness of JWCC, relative to "traditional" community colleges in the state, can be seen in Table I, which compares the Net Instructional Cost at JWCC with other community colleges in the state that produced fewer than 40,000 credit hours in FY 1978.

JWCC compares favorably with other colleges of similar size throughout the state. When compared to other districts in Western Illinois, JWCC has the lowest Net Instructional Cost. This is depicted in Table II, which compares the unit cost of JWCC and surrounding institutions for FY 1978.

A further indicator of the economic efficiency of the JWCC operation is that while the absolute unit costs at community colleges throughout the state have been increasing, the unit cost at John Wood has been decreasing. This is due in part to development of a variable rate formula for establishing reimbursement amounts with contracting institutions. The base rate varies from one institution to another, depending on the individual institution's costs. Enrollments beyond set ranges result in a reduction in the base rate. Two such "breaks" are built into the rate schedule.

2. Summary of Cost Effective Features

Given below is a summary of the major ways in which John Wood realizes cost savings through its common market arrangement.

a. Instruction (Quality, Diversity, and Flexibility)

   1) Curriculum diversity - A wider range of course offerings is available to a larger number of students. JWCC presently offers 614 courses. This can be related to comparable institutions (see Table III). In addition, by merging students in high cost programs, more educational service per dollar invested is realized.

   2) Geographic accessibility - The most practical location for instruction, geographically, makes shorter commuting distances possible for students and staff.

   3) Highly credentialed faculty - Students have greater opportunity to enroll for instruction from more highly qualified faculty members (see Table IV).

   4) Flexible schedules - Scheduling of classes for students is easier and more flexible since courses may be offered more often and on a more regular basis.

   5) Reverse contracts - JWCC assumes the role of vendor with respect to certain courses and programs; e.g., agriculture programs. This makes for more efficient operation in terms of student/teacher ratios, etc.

   6) Use of cooperative agreements - Joint funding and staffing of the Agriculture Research Center with the University of Illinois and utilization of the resources of Harris Corporation for the Broadcast Technology program, exemplify the use of creative approaches to resource sharing to build high-quality cost effective programs.

7) Innovative staffing patterns - JWCC utilizes shared staff such as the Campus Coordinator, a full-time John Wood staff person who acts as a liaison to a particular contracting institution. The Coordinator's combined teaching and administrative duties enable him to provide a "clearinghouse" service for students, faculty, and administrators.

b. Student Services/Independent (Auxiliary) Operation

1) Advising - The use of part-time academic advisors allows the college to provide advising services on an extended time schedule, adjust staffing for peak periods, and identify specialized advisors for target groups. Presently, there are 17 part-time advisors, all of whom hold either a bachelor's or master's degree. Student response shows that the part-time cadre of advisors has been highly successful in meeting their needs.

2) Admissions - A cooperative attitude among the common market colleges has allowed JWCC to spend very little time or funds in recruiting students.

3) Placement - Placement services are coordinated between JWCC and each common market campus. While little has been saved financially, students receive a much better placement service with the coordinated approach; thus, indirect cost savings are evident.

4) Housing - Since housing is available on the common market campuses, little, if any, JWCC staff time is spent helping students find suitable housing.

5) Activities - JWCC students may participate in activities on any JWCC common market campus. Those activities offered directly by JWCC are coordinated with other campus programs to avoid duplication and provide meaningful activities. In addition, several activities are co-sponsored by one or more common market campuses, in cooperation with JWCC.

6) Athletics - John Wood students have access to a wide range of NAIA-sanctioned, intercollegiate athletics through the common market institutions. Thus, a sports program of far greater variety than those available at community colleges of comparable size is available to JWCC students.

c. Academic Support

1) Learning resources - The reciprocal arrangement for use of library materials and supplementary learning resources gives students of the common market colleges access to a substantial collection, while allowing the institutions to share costs.

2) Faculty Development - JWCC has been able to facilitate faculty development activities for indigenous staff, as well as staff at common market institutions through cost sharing and the generation of external funds.

d. Institutional Support

1) Research - Several cooperative research projects are in progress or have been conducted since the inception of the college.

2) Advertising - JWCC has realized considerable savings through advertising jointly with other common market colleges.

3) Computer services - Rather than investing in a large data processing shop, John Wood has purchased computer time from Sauer Computer Systems, Inc., in St. Louis. An arrangement known as a Time Sharing Option allows agencies to plug into a central computer. Consequently, the only "hardware" the college has had to purchase is three printing terminals.

e. Facilities (Capital Outlays)

1) Debt service - JWCC has avoided any bond indebtedness. While construction of facilities does generate assets as well as liabilities, the interest paid on borrowed money, plus any foregone investment revenues, represent a "loss". Moreover, planned capital projects for the outlying areas of the district will be financed from the district equity which has been accumulated.

2) Capital outlays - JWCC has analyzed statewide historical costs for plant and equipment to derive the "normal" proportionate costs for plant and equipment costs per semester credit hour produced. This proportionate share (3/13) of production cost is used as a factor of the negotiated rates paid to the institutions from whom JWCC purchases instruction. In this manner, these costs are directly proportional to credit hour production levels; therefore, no "excess" plant or equipment is generated. This is particularly important in that the College can initiate community-based programs (i.e., "go out into the community") without creating inefficient use of the college's plant or equipment.

C. Summary

The JWCC experience demonstrates not only that this model is cost effective for the state but that there are benefits to the participating institutions. There is little doubt that unnecessary duplication of programs and services has been eliminated and this means that there is much better utilization of existing manpower and resources. The contracting concept has allowed JWCC staff to concentrate on developing non-traditional delivery systems.

The students benefit from this system in a variety of ways. They have a broad range of courses, degree programs, faculty, services, and institutions from which to choose. Furthermore, the students pay less than they would if enrolling directly in one of the participating institutions.

Finally, the contracting institutions are aided. They are educating students that might not otherwise have come to their institution. This provides revenue and a new pool of students, many of whom re-enroll at the contracting institution after completing their goals at JWCC.

Because of the success of the common market arrangement, participating institutions have now decided to revitalize a consortium that had one time existed. Under the leadership of a newly-appointed Executive Director, the consortium will pursue cooperative ventures to promote cost effectiveness and improve services to the area by capitalizing on the diversity of programs available at the contracting institutions. The consortium will coordinate activities such as shared faculty, joint purchasing of materials and supplies, and special projects such as a program of professional development.

Table I

Net Institutional Cost Per Credit Hour (NICCH)
For Illinois Community Colleges Generating
Less Than 40,000 Credit Hours*
1975-1978

	1977-78			1976-77			1975-76		
College	Cr. Hrs.	NICCH	Rank	Cr. Hrs.	NICCH	Rank	Cr. Hrs.	NICCH	Rank
A	32,440	45.28	1	37,857	43.19	2	37,889	37.22	1
B	38,812	46.84	2	46,111	41.37	1	41,700	42.62	3
C	36,052	52.27	3	34,745	49.95	3	53,230	41.61	2
D (JWCC)	39,825	54.90	4	30,467	57.03	4	12,634	65.16	6
E	20,675	55.72	5	19,094	61.81	5	18,163	64.54	5
F	37,327	62.60	6	36,849	64.83	6	37,875	58.76	4
G	31,944	76.21	7		**		34,588	68.26	7
H	26,400	86.54	8	23,563	88.79	7	21,880	84.70	8
Mean for all Illinois Community Colleges		57.30			52.84			48.14	

*Base year for determing inclysing in table is 1977-78. Letter codes have been substituted for the names of the community colleges.

**No data available

Table II

College	Credit Hours	Unit Cost
D	39,825	$54.90
I	75,324	61.79
J	89,201	67.02
K	43,637	70.15
Mean	61,997	68.47

Table III

Classification of Courses Offered by JWCC

PCS Code	Description	No. of Courses
1.1	Baccalaureate Transfer	345
1.2	Vocational	206
1.3	Community Education (non-credit)	0
1.4	Remedial/Developmental	19
1.5	General Studies (other)	19
1.6	Developmental and/or Review of Vocational Skills	25
	TOTAL	614

Table IV

Comparative Educational Backgrounds of College Faculties*

Selected Illinois Community Colleges	Doctors	Masters	Bachelors	Associates	Percent of Doctors	Rating**
K	-	18	-	-	0.0	3.00
H	2	17	1	-	10.0	3.05
J	7	76	2	-	8.2	3.06
I	7	35	1	1	16.3	3.09
Combination of the Above	16	146	4	1	9.6	3.08
Common Market Colleges						
Hannibal-LaGrange	3	16	1	-	15.0	3.10
Quincy	26	51	3	-	32.5	3.29
Culver-Stockton	16	25	2	-	37.2	3.33
Combination of the Three Above	45	92	6	-	28.2	3.24
***JWCC	1	6	-	-	14.3	4.14
Combination of the Four Above	46	98	6	-	24.75	3.22

*Based on full-time faculty listed in the latest catalogs in baccalaureate programs. Includes neither administrators nor vocational faculty.

**Based on a four point scale: doctors (4), masters (3), bachelors (2), associate (1)

***JWCC facilatators, coordinators, and directors (all full-time employees who have regular teaching responsibilities).

Cooperative Arrangement: York County Community College Services (YCCCS)

Title of Program: York County Community College Services

Participating Institutions:

- University of Southern Maine
- Southern Maine Vocational Technical Institute
- High schools
- Public libraries
- Hospitals
- Churches
- Nasson College

Administration:

Dr. George P. Connick
Director, Associate Degree Studies, University of Southern Maine (USM)
Co-Director, York County Community College Services

Dr. William Warren
Dean of Instruction, Southern Maine Vocational Technical Institute (SMVTI)
Co-Director, York County Community College Services

A. Program

This case study examines the cost effectiveness of the participation of the University of Southern Maine in a cooperative community college project named York County Community College Services (YCCCS).

In December, 1972, the Chancellor of the University of Maine, the Commissioner of Education, and the four private college Presidents in Southern Maine (Nasson, St. Francis, St. Joseph's and Westbrook) appointed representatives to a planning committee, chaired by Dr. George P. Connick, and assigned them the task of developing a plan to expand postsecondary educational opportunity to York County. Requests for additional postsecondary opportunity in York County had been made by leading citizens and legislators for several years before 1972. A lack of positive response had led to the submission of legislation by three different legislators in the Fall, 1972, proposing creation of a York County Community College. Once the planning committee was created, the three legislators withdrew their proposed bills.

The planning committee held weekly meetings for four months and submitted a plan for the creation of a cooperative community college system for Southern Maine.

As a part if its planning effort, the planning committee staff prepared a detailed and lengthy demographic study of Cumberland and York Counties. The demographic study identified four major access barriers to higher education.

First, the existing public and private colleges mainly offered traditional four-year programs, while job opportunities in Maine were eight times greater for associate degree graduates. Second, the state could not afford to construct or maintain additional campuses. Third, a large number of Maine's citizens of all ages lived too far from existing campuses to make commuting realistic during severe Maine winters. Fourth, those who lived beyond commuting distance to a campus tended to have the lowest family income, and thus were less able to send their children away to school or to attend themselves.

Given these problems, the final plan developed included three recommendations. First, that a new cooperative community college structure should be developed to offer comprehensive occupational, technical and liberal arts programs and other services to meet the economic and cultural needs of the Southern Maine region. Second, that such programs should be delivered by using existing public and private educational institutions and facilities, including museums, libraries, churches, community centers, hospitals, etc. And third, that the heart of the program should be regional learning centers, using leased facilities conveniently located to serve the largest number of people.

The plan incorporating these recommendations was approved on July 5, 1973, by the Chancellor, the Commissioner, and the four private college presidents, and a decision was made to test the model immediately in York County.

Moving quickly following the July 5 approval, learning centers were opened on August 1 in Beddeford and Sanford, and classes began on the first of September, 1973. With only a month to advertise its programs, the college was still able to open with 311 part-time students, 560 individual registrations, 37 courses and 3 degree programs. Now in its sixth year, the college has 85 courses, 10 degree programs, and 725 students. Classes are taught in over a dozen locations. Since it began operations, more than 4,000 individuals have enrolled for courses with the college. Student survey results show that the average age of the student is over 30 years, that over 90% are the first in their family to attend college, and that they would not be attending college at all if it were not for the low cost and its availability close to home.

York County Community College Services is Maine's first community college without a campus. Utilizing both traditional and non-traditional learning approaches, it serves an area of 1,000 square miles in Southern Maine, offering a variety of certificate programs and associate degree programs.

The heart of this project, and the most identifiable unifying force, are the two learning centers in Biddeford and Sanford. Approximately 20 miles apart, these two centers place one-stop educational counseling services within 15 minutes driving time of 75% of the residents of York County. In a single trip to a learning center, a student may receive academic counseling, be admitted to a program in the college, register for courses, apply for financial aid, and pay bills for tuition and fees. The small staff, consisting of the Center Director, a full-time and a part-time Counselor, a Secretary, and work-study students, is organized so that they may spend the great proportion of their time working directly with the students.

The entire instructional staff of the college is part-time. Some faculty teach more than one course; some have taught at the college since it opened in 1973. None teach full-time and there are no plans to employ more than a small core of full-time faculty in the foreseeable future.

York County Community College Services has a unique organizational structure which represents a significant example of how a cooperative effort can provide quality education at limited cost through the sharing of resources and responsibilities. The Division of Associate Degree Studies (ADS), University of Southern Maine, and Southern Maine Vocational Technical Institute jointly administer the project, and each institution offers a variety of certificate and associate degree programs in York County. The overall project is supervised by a Joint Administrative Board (JAB) made up of representatives from University of Southern Maine, Southern Maine Vocational Technical Institute, and an adult education director and citizen from York County. The JAB provides general policy direction, supervision, and evaluation of the progress of the project.

B. Costs

The University of Southern Maine's share of the York County Community College Services budget is made up of three components: 1) the learning centers, 2) instruction, and 3) administration.

The learning center budget is for the staffing and operation of the Biddeford and Sanford offices of York County Community College Services. In fiscal

1978-79, each office was staffed by a learning center Director, a full-time Counselor, a half-time Counselor, one Secretary, and a quarter-time Clerk. In addition to the staff at each center, a half-time administrative aid directs the publicity efforts of the program, as well as providing administrative liaison bwtween USM and SMVTI. Rental for the two conveniently located offices is paid through this budget, as are the telephone, postage, photocopying,and the other expenses involved in operating the offices.

The instructional budget pays the salaries for the part-time instructors (17 FTE faculty) employed at YCCCS, as well as classroom rentals, supplies, and faculty travel reimbursement.

The administrative budget includes three professional and one classified position. Table I outlines the expenditures for each of these three budget entities for the fiscal years of Associate Degree Studies/YCCCS's existence. It should be noted that the University of Southern Maine serves as the fiscal agent for all YCCCS revenue and expenditures.

At its inception, the YCCCS project received $95,000 in funding from the Chancellor's Office. A total of $50,000 was to fund one-half the operation of the learning centers, with the remaining $45,000 for the payment of instructional expenses. USM allocated $25,000 from its Academic Planning Office to help with the administrative costs of the program. Thus, a total of $120,000 in University funding was initially allocated to the project. Since the learning centers are a joint venture with Southern Maine Vocational Technical Institute, SMVTI and the State Department of Education pay one-half the expenses of the learning centers. Additional funds necessary to operate the project are generated from student tuition. Table II outlines the sources of USM revenue for the project in the first four years.

The 1973-74 to 1975-76 period represented a period of stable University funding with tuition income quadrupling. The prosperity of 1975-76 was reflected in the $52,116 surplus generated by the program. Fiscal year 1976-77 brought about a drastic cut in University funding for USM/YCCCS. The decrease of $115,300 in University funding was rationalized in the following manner: a cut of $52,100 due to the surplus of the prior year, a goal of generating $26,200 in tuition above and beyond the $257,990 of the prior year, an expense cut of $17,000 as a classroom lease with Nasson College was to be terminated and less expensive facilities at Sanford High School were available, and a general cut in expenses of $20,000. Had University of Maine support for the project remained at the 1975-76 level, 1976-77 would have shown a net surplus of $67,650 rather than the deficit of $47,650.

The $37,000 cut in expenditures is shown in Table I and it indicates that the 1976-77 expenses for the project were actually $49,000 lower than in 1975-76.

The major problem encountered in 1976-77 was the veteran delimiting date which occurred on May 31, 1976, thus causing pre-1965 veterans to lose their educational benefits. Based on an analysis of Fall, 1976, enrollment statistics, it was found that the loss of veterans causes a $36,140 revenue loss, or approximately $72,000 in revenue loss for the fiscal year.

Another problem encountered was the increase in University tuition from $25 to $30 per credit hour. It must be kept in mind that York County is serving an adult population whose incomes tend to be lower than the family incomes of campus-based students and who have much greater family responsibilities (children, jobs, homes, etc.) than do campus students. The analysis of the Fall, 1976, student characteristics and statistics indicated that 22 students did not return to YCCCS in 1976-77 because they could not afford the higher tuition. Fall, 1976, saw a decrease in the average course load per student, from 2.553 courses per student in 1975-76 to 2.351 courses per student in 1976-77. This loss of students and decrease in course load per student reduced tuition revenue by $50,620 for the fiscal year, with only $39,210 being recovered through the higher tuition charges. A total of $11,400 in revenue, thus, was lost due to the tuition increase. Had this loss and the $72,000 veteran tuition loss not occurred, tuition revenue would have been $307,550 for 1976-77, or some $23,360 above the tuition generation goal for the year.

Two important financial considerations concerning the project are contained in Table III. The first is that the expenditure per full-time equivalent student in 1976-77 is only $923.67 as compared to the $2,141.63 expenditure per FTE for all campuses in the University system. A second major financial consideration is the tuition revenue as a percentage of expenditures. In fiscal 1973-74, tuition represented only 28.1% of the ADS*/YCCCS expenditures. Tuition increased to 55.7% of the expenditures in fiscal year 1974-75 and to 76.1% of expenditures in 1975-76. Even with the reduced tuition generation of fiscal year 1976-77, tuition represented 77.4% of the project's expenditures. Thus, ADS/YCCCS tuition represents almost twice the 41.3% proportion which tuition revenue represents of the expenditures for all University of Maine campuses.

C. Evaluation of Cost Effectiveness

1. Cost savings

The cost of instruction per full-time equivalent student is far lower in YCCCS than it is in other units of the University. The cost of instruction in YCCCS per FTE, using the average University of Maine system's figure (i.e., 314 FTE x $2,160.21) would have been $678,305.94 in 1976-77. This means that the YCCCS project offered $678,305.94 in University services for $290,000 or a savings of $338,395.94 in a single year.

2. Cost avoidance

York County Community College Services owns no buildings. The expenses related to the operation of YCCCS are comprehensive in that they include the cost of renting and maintaining space for both classrooms and offices. As a further benefit, the facilities of the public schools, churches, libraries, hospitals, etc., are more efficiently utilized as a result of the YCCCS philosophy of renting available space from community agencies and organizations. The taxpayers, therefore, realize a greater benefit from the facilities for which they have already paid; they do not need to incur additional expenses to receive these educational services.

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*Refers to the Associate Degree Studies, University of Southern Maine.

3. Access

The YCCCS project has removed many of the traditional barriers for adults returning to school. Because a number of institutions were willing to cooperate to provide programs, services, and space, it has opened educational access for almost three-quarters of the population of York County. This could not have been done without the cooperation of all the institutions involved.

4. Diversity of Programs

The cooperative approach of USM and SMVTI has made possible the delivery of an integrated program of academic and vocational-technical courses and programs to the citizens of York County. Neither institution, operating individually, could have provided as comprehensive or as appropriate an educational opportunity as the two institutions can provide as a result of working together.

5. Elimination of duplication

The cooperative approach has led to the elimination of unjustified duplication in course offerings and programming in YCCCS. Decisions are made in advance as to which institution will offer courses which might duplicate the course offerings of the other campus. For example. the decision was made after one year of experience with the project, that the University would develop the remedial courses in writing, math, and reading. Students in the vocational-technical programs take their developmental courses from the University. Likewise, the course schedule is reviewed carefully well in advance of each academic year to insure that there are no courses which would duplicate those of the other institution. Students are allowed to cross-register for courses within the institution. The value of eliminating class duplications is seen in the fact that courses have an opportunity to fully enroll, rather than having duplicate courses with insufficient enrollment.

6. Cooperation and communication

Prior to the planning and implementing of YCCCS, there was little formal or informal communication between the postsecondary institutions in Southern Maine, especially at the middle-management operating level. This situation has been dramatically altered and there are now both formal and informal, routine relationships between campuses. Most importantly, people know each other and they do not hesitate to pick up the telephone to call to clarify issues to to solicit advice, information, or assistance.

For all of these reasons, the YCCCS project has been of tremendous cost benefit to the citizens of the State of Maine. And, most importantly, the project is delivering public postsecondary education to a region which had not enjoyed it previously.

Table I

USM/YCCCS Expenditures by Function (1973 - 1977)

Fiscal Year	Learning Centers	Administrative	Instruction	Total Expenses
1973-74	$ 97,614	$ 63,983	$107,000	$268,597
1974-75	112,503	77,227	152,351	342,081
1975-76	107,142	71,597	215,235	393,974
1976-77	105,200	75,700	174,100	345,000

Table II

USM/YCCCS Revenue by Category (1973 - 1977)

Fiscal Year	U of M Appropriation	Tuition Income	SMVTI Appropriation	Total Revenue	Net Surplus of (Deficit)	Tuition as % of Univ. Expenses
1973-74	$120,000	$ 61,809	$ 48,809	$230,618	($37,979)	28.1%
1974-75	120,000	159,189	56,193	335,382	(6,699)	55.7%
1975-76	133,100	257,990	55,000	446,090	52,116	76.1%
1976-77	17,800	224,550	55,000	297,350	(47,650)	77.4%

Table III

Expenditures per Full-Time Equivalent Student 1976-77*

University of Maine Campuses

	Expenditures	FTE Students	Expenditures Per FTE	Tuition as % of Expenditures
Augusta	$ 2,723,976	1,592.2	$1,710.83	58.6%
Farmington	3,125,370	1,762.7	1,773.06	38.7%
Fort Kent	1,135,634	476.6	2,382.78	34.7%
Machias	1,319,990	622.7	2,119.78	33.2%
Presque Isle	2,183,432	1,089.9	2,003.33	37.9%
Orono	24,337,363	9,858.2	2,468.74	4[illegible].0%
Southern Maine (a)	9,636,969	5,184.9	1,860.59	43.2%
Sub Total (b)	$44,472,734	20,587.2	$2,160.21	
ADS and YCCCS	290,000(c)	314.0	923.67	77.4%
System	$44,762,734	20,901.2	$2,141.63	41.3%

(a) Excludes YCCCS FTE students and budget.

(b) The system expenditure per FTE, excluding ADS/FCCCS, is $2,160.21, which is $18.58 higher than the system cost when ADA/YCCCS is included.

(c) A total of $224,550 of the University contribution to ADS/YCCCS was generated through student tuition. Tuition revenue thus represents 77.4% of expenditures.

*Source of expenditures data: University of Maine Office of Financial Planning, "Unrestricted E&G Budgets: 1976-77," June 4, 1976, Chart 1, Tab A.

Source of FTE data: University of Maine Office of Financial Planning, "Annual Report of Degree Credit Enrollments in the University of Maine: Fall 1968 -- Fall 1976," December 9, 1976, p. 10.

Cooperative Arrangement: Mid-Coast Community College Services (MCCCS)

Title of Program: Mid-Coast Community College Services

Participating Institutions:

- University of Maine at Augusta
- High schools
- Libraries
- Vocational-technical institutes
- Hospitals
- Museums

Administrator:

Ms. Pamela MacBrayne, Director, Mid-Coast Community College Services

A. Program:

Mid-Coast Community College Services, which is patterned after York County Community College Services, began operations in the summer of 1975, after an Academy for Educational Planning Commission Report identified the mid-coast region as one of three areas in Maine where postsecondary educational opportunities were greatly limited. The plan to provide these services involved the University of Maine at Augusta (UMA), two vocational technical institutes, and the local cooperative boards for vocational education. The latter provided office space and assistance with community contacts while the vocational-technical institutes provided counseling services on an occasional basis for those pursuing postsecondary vocational training. (There are no postsecondary vocational institutions within a 60 mile radius of the Rockland center and the closest university campus is in Augusta, 50 miles away.)

During the summer of 1975, regular office hours were scheduled one day each week in both Rockland and Belfast. Over 300 contacts were made that summer by various UMA staff members and a volunteer from the community. Rather than hiring an additional staff person during this experimental period, the Counseling, Financial Aid, and Veterans' Services offices provided services according to the demand. These student services were seen as essential for a program which serves primarily a low income, non-college oriented clientele.

Now in its fourth year of operation, one can readily see the growth and improvement in the postsecondary educational opportunities in the mid-coast region. Perhaps the most crucial improvement has been increased services and availability of administrative and student services staff, enabling the college to meet the needs of students more effectively and increasing the visibility of MCCCS in the community. Due to the excellent response to the first semester offerings, a part-time development and information counselor was hired. Subsequently, that position became full-time in September, 1976, thereby increasing on-site services and visibility. The Director is the only full-time professional and is assisted by a half-time Secretary.

Counseling hours have been expanded, in response to student demand, from six hours per week in 1975 to two full days at present. In addition, a veterans' counselor is available at the MCCCS office in Rockland once a week, and a financial aid representative is available semimonthly. Representatives of the UMA bookstore sell books at each MCCCS class site during the first two weeks of classes. Mail order service is also available.

An important addition to the staff has resulted from a CETA Title VI proposal. A total of three outreach workers in Knox and Waldo Counties have been hired to inform the community of the programs and courses being offered locally and to help ascertain the educational needs of the mid-coast region. This, again, has assisted the college in terms of greater visibility and greater responsiveness to local needs.

The installation of a toll-free number to the Augusta campus has been instrumental in increasing services for students. Despite the improvements in staffing and the subsequent improvement in services, many offices, such as the registrar's and business offices, were available only at additional expense to off-campus students. The toll-free number, thus, has played a large part in the equalization of services provided to students.

During the first year of operation, courses leading to the Associate Degree in Criminal Justice, Liberal Studies, and Business were offered. UMA's Associate Degree in Nursing was offered during the second year, with clinical experiences provided in cooperation with Penobscot Bay Medical Center. On May 13, 1978, the first class to take the entire program at MCCCS was graduated.

With the cooperation of Kennebec Valley Vocational Technical Institute (KVVTI), a Secretarial Science program began during the second year of operation. KVVTI provides the skills component while MCCCS offers the academic courses. This program was established because of the perceived and documented need for trained secretaries, based on job openings, in the mid-coast region. A recent study conducted by the Department of Manpower Affairs lists the occupation of secretary as the second most desirable for training to meet projected job availability in Knox County.

MCCCS also has begun to offer developmental (or remedial) reading and writing courses on a more regular basis. The use of a controlled reader from UMA has eliminated dependence on the local high schools for use of their equipment. Basic mathematics courses also are offered regularly.

Certain courses in current degree programs are being offered as a result of direct student requests. In an effort to meet the needs of those who are not enrolled, college staff have completed a regional needs assessment. Although the results have not been thoroughly analyzed, initial results indicate that health, business, and social science are the educational areas for which the greatest demand exists. It is notable that a significant number of people who would like to continue their education did not indicate the area in which they would prefer to study, suggesting the great need for career and academic counseling.

Community service offerings are another important component of MCCCS, but require a good deal of time and planning. The programs, if they are to be successful, must be designed to meet specific needs at specific times. Through their contacts with the community, the outreach workers and the director compile this information. A great deal of time is spent with municipal officials, employees of social service agencies, business persons, and local citizens from a wide variety of occupations. The individuals and the people with whom they have daily contact are all potential users of services.

During the first year of operation, the college was provided free office space in Rockland by Region 8 Cooperative Board for Vocational Education. With the completion of its building and subsequent move, the college assumed the lease for that property.

At Belfast, after using public school and state government offices on a shared basis, MCCCS is now being provided space in the Belfast Free Library. This one-day-a-week arrangement provides greater service to Waldo County than was previously possible.

Due to an increased number of courses and a greater utilization of space over the past three years, the college now pays a small fee for the use of the Rockland District High School. Facilities at the Belfast and Camden-Rockport High Schools, which are utilized somewhat less, are still provided free of charge.

MCCS has used the schools in Waldoboro, Thorndike and Searsport, as well as the Farnsworth Art Museum in Rockland, for occasional courses.

To provide better facilities for the nursing students and faculty, who are full-time rather than part-time, office and classroom space has been rented at the former Knox General Hospital in Rockland.

B. Costs

The administrative and instructional cost of operating MCCCS in each of the past two years is shown in Table I.

Table I

Mid-Coast Community College Services Budget

	1977-78	1978-79
Personnel (Administration, faculty, secretarial)	$105,790	$129,725
Office supplies, including advertising	6,430	5,410
Travel	4,300	4,500
Rent	6,450	6,450
Support Services (career & academic counseling, financial aid and veterans counseling; part-time)	7,500	7,800
	$130,470	$153,885

Table II outlines the FTE costs of operating MCCCS and the other University of Maine campuses. For the academic year, 1977-78, MCCCS had the lowest FTE cost in the University system, $1,279. This may be compared to $1,358 for operating York County Community College Services* (the second lowest) and an average of $2,344 for the University system. In 1978-79, this same pattern continued. MCCCS had an FTE cost of $1,269, YCCCS was $1,379 and the average in the University system was $2,521. Full costs of operation and direct overhead costs of the parent campus have been included in the calculation of the expense budget for MCCCS.

Although it can be argued that MCCCS does not offer the full range of convenient services available on the other campuses, it is important to emphasize that the population base of the mid-coast region of Maine is too small and too dispersed to support a traditional community college campus. MCCCS serves the counties of Knox, Lincoln and Waldo which have a combined population of less than 75,000 people and a geographic area of 1,560 square miles, an area 1½ times as large as the state of Rhode Island.

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*Refer to the case study titled "A Study of the Cost Effectiveness of the University of Southern Maine Participation in York County Community College Services," elsewhere in this report.

The cooperative approach used by MCCCS is probably the most feasible method that could have been used to deliver educational opportunity to this geographically isolated and dispersed portion of the state's population.

C. Cost Benefits:

1. Cost avoidance

There is no specific data to illustrate cost avoidance, but there is little question it has occurred. MCCCS has not constructed any physical facilities. In fact, the full costs of operating MCCCS, including the rental and maintenance of space, are identified while the construction and interest costs of constructing campus facilities are not shown in the FTE calculations of the traditional campuses. The true cost of educating a student would be considerably higher if those costs were included with the operating budget costs in calculating FTE cost.

2. Cost savings

As illustrated in Tables I and II, the cost per full-time equivalent student in MCCCS is approximately one-half that of the University system average. Moreover, Mid-coast offers the same benefits to the citizens of the mid-coast region as York County Community College Services offers to its service region. These services include a broad range of courses and programs, elimination of duplication between institutions, access for citizens not otherwise able to take advantage of postsecondary education, and a reasonable cost to the taxpayers.

The cost of instruction in MCCCS per FTE in 1978-79, using the average University of Maine system's figure (i.e., 121.3 x $2,521) would have been $305,797.30. Therefore, the MCCCS project provided $305,797.30 in University services for $153,885 - a savings of $151,912.30 in 1978-79.

3. Other benefits

MCCCS has program flexibility that does not exist on most traditional campuses. Since the faculty are part-time, only those courses and degree programs are offered and staffed that meet identified community needs. If enrollment declines, programs can be reduced or discontinued.

In summary, it is apparent that a variety of educational opportunities have been provided in a low density population area at a reasonable cost by using this unique cooperative academic and administrative structure.

Table II

University of Maine Campuses

Expenditures Per Full-Time Equivalent Student

1976-77/1977-78/1978-79

	1976-77			1977-78			1978-79		
	Expense	FTE Students	Exp/ FTE	Expense	FTE Students	Exp/ FTE	Expense	FTE Students	Exp/ FTE
Augusta	$ 2,723,976	1,592.2	$1,711	$ 2,549,046	1,512.5	$1,685	$ 2,682,115	1,471.9	$1,822
MCCCS				130,470	102.0	1,279	153.885	121.3	1,269
Farmington	3,125,370	1,762.7	1,773	3,359,828	1,702.2	1,974	3,512,000	1,701.2	2,064
Fort Kent	1,135,634	476.6	2,383	1,188,875	398.8	2,981	1,252,000	349.8	3,579
Machias	1,319,990	622.7	2,120	1,380,168	580.7	2,377	1,440,000	551.3	2,612
Presque Isle	2,183,432	1,089.9	2,003	2,239,541	1,102.5	2,031	2,433,000	1,080.1	2,253
Orono	24,337,363	9,858.2	2,469	26,769,684	10,027.4	2,670	28,560,000	9,870.3	2,894
USM	9,646,969	5,184.9	1,861	10,636,500	5,069.7	2,098	11,287,000	5,107.5	2,210
YCCCS	290,000	314.0	924	303,734	223.6	1,358	315,000	228.4	1,379
Totals	$44,762,734	20,901.2	$2,142	$48,557,846	20,719.4	$2,344*	$51,635,000	20,481.8	$2,521*

*The average University system FTE student cost, excluding Mid-Coast Community College Services and York County Community College Services was $2,381 in 1977-78 and $2,542 in 1978-79.

Cooperative Arrangement: Coast Community College District

Title of Program: Coastline Community College Library Services Contract

Participating Institutions:

Coastline Community College
Huntington Beach Library and Cultural Center

Administrator:

Dr. Peter Vander Haeghen, Director, Learning Systems and Services, Coastline Community College

A. Program:

"Coastline Community College is one of three colleges in the Coast Community College District located on the coastal edge of northern Orange County, California. The Coast Community College District has a population base of approximately 550,000 people. Through its comprehensive educational program, the Coast District has been able regularly to make an impact on over 40% of the population with its programs, courses, and educational activities. Coastline Community College, which began in the fall semester of 1976, opened its doors with over 20,000 students. It currently serves students at more than 150 sites throughout the 105 square mile area of the district. Coastline Community College truly is a 'college beyond walls."

The model presented in this case study was developed to avoid the traditional costs associated with constructing and operating an academic library for a campus-based community college. The key to the formation of the Coastline Community College concept was the idea that the college would use the existing resources of the community rather than build its own campus. Applicable to that concept was the development of library services and agreements with existing academic and public libraries to provide library services.

Table I describes the costs that would be attributable to a college in southern California for the construction, staffing, and operation of a typical learning resources service for a community college with approximately 20,000 students. It should be noted that the cost of the learning resources operation noted in this example is rather conservative when compared to community colleges of similar size.

The first two years noted in the chart are for planning and construction of the facility with an estimated facilities cost of $3,000,000 plus the cost of a minimal staff necessary to initiate the program.

Years three through seven reflect initial operation. They are expensive years since the collection of materials is being developed, new staff are being hired, and new services identified. On the positive side of the early years of operation are those costs that are not experienced by an older institution because of the newness of equipment, furnishings, and systems. After the fifth year of operation, many of these items need to be replaced or refurbished.

The overall services encompassed in this traditional learning resource center are similar to the services available at the sister colleges of Coastline and the public library that Coastline has identified as its primary library resource. As can be noted on the bottom line of the financial columns, Coastline estimates approximately a $9,000,000 cost for a permanent facility.

As an alternative to constructing and operating its own learning resource center, Coastline has negotiated a contract with the Huntington Beach Library and Cultural Center to provide the services it needs. Although this approach violates some of the traditional feelings regarding control, appropriately designed facilities, staffing dedicated to the institutional mission, and a facility with which the community can identify, Coastline has been able to demonstrate that many of those items are not necessary in order to provide quality service to students and faculty. In certain cases, such as the elimination of the need for construction money, high operating costs, staff salaries, and duplication of books and other material resources, public opinion is greatly in favor of the Coastline system.

The contract between Coastline and the Huntington Beach Library will serve as a model for future Coastline-public library contracts. Reproduced in Table II are the main features of the contract.

B. Cost analysis:

The average estimated annual cost to Coastline for the contract with the Huntington Beach Library is $60,000. When compared to the traditional model, it is obvious that with the cooperative approach, the contract will achieve substantial savings. For example, the operating costs for the traditional model presented in Table I in Year Three is projected at $905,500 and in Year Four at $957,800. The cost avoided through the contract with the Huntington Beach Library is $845,500 in Year Three and $897,800 in Year Four.

The seven-year estimated cost of the contract with the Huntington Beach Library is $420,000. The total cost saving or cost avoided attributable to this project, therefore, is approximately $8,500,000 for seven years. It is reasonable to assume that the savings would continue to be nearly $1,000,000 per year each year thereafter.

COASTLINE COMMUNITY COLLEGE LIBRARY SERVICES

VS

TRADITIONAL LIBRARY SERVICES FOR A 20,000 STUDENT COMMUNITY COLLEGE

	1st. Yr.	2nd. Yr.	3rd. Yr.	4th. Yr.	5th. Yr.	6th. Yr.	6th. Yr.	7th. Yr.	TOTAL
	Planning & Construction With Minimal Services		OPERATION						
1. Traditional *									
A. Staff **									
1. Administrative	$ 55,000	$ 70,000	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000	$ 675,000
2. Professional (faculty)	40,000	60,000	90,000	125,000	140,000	140,000	140,000	140,000	735,000
3. Classified (Clerical & Technical)	35,000	55,000	250,000	250,000	330,000	330,000	330,000	330,000	1,580,000
Subtotal:	$130,000	$185,000	$450,000	$485,000	$158,000	$580,000	$580,000	$580,000	$2,990,000
B. Fringes	$ 28,650	$ 40,700	$118,500	$124,800	$127,600	$127,600	$127,600	$127,600	$ 695,450
C. Supplies									
1. Office	$ 2,000	$ 2,500	$ 6,000	$ 7,000	$ 7,000	$ 7,500	$ 7,500	$ 8,000	$ 40,000
2. Printing	1,000	1,000	3,000	4,000	4,000	4,500	4,500	4,500	22,000
3. Audio Visual	500	500	10,000	12,000	14,000	15,000	15,000	15,500	67,500
4. New Acquisitions	200,000	200,000	150,000	150,000	100,000	80,000	90,000	75,000	955,000
5. Publications & Dues	20,000	20,000	20,000	25,000	25,000	30,000	30,000	30,000	170,000
6. Books & Bindings	20,000	20,000	20,000	25,000	25,000	30,000	30,000	30,000	170,000
7. Repair Parts	-0-	-0-	5,000	7,000	10,000	12,000	12,000	15,000	49,000
8. Film Rental	1,000	1,500	5,000	9,000	1,200	1,700	1,700	20,000	65,500
Subtotal:	$244,500	$245,500	$219,000	$239,000	$197,000	$196,000	$196,000	$198,000	$1,539,000
D. Contractual Services									
1. Maintenance of Equipment	$ 1,000	$ 1,000	$ 5,000	$ 6,000	$ 10,000	$ 10,000	$ 10,000	$ 12,000	$ 45,000
2. Equipment Lease	20,000	20,000	40,000	40,000	45,000	50,000	50,000	50,000	265,000
Subtotal:	$ 21,000	$ 21,000	$ 45,000	$ 46,000	$ 55,000	$ 60,000	$ 60,000	$ 62,000	$ 310,000
E. Travel									
1. Local	$ 1,000	$ 1,500	$ 3,000	$ 3,000	$ 3,500	$ 4,000	$ 4,000	$ 4,000	$ 20,000
2. Conferences/Travel	5,000	7,000	15,000	15,000	17,000	18,000	18,000	19,000	96,000
Subtotal:	$ 6,000	$ 8,500	$ 18,000	$ 18,000	$ 20,500	$ 22,000	$ 22,000	$ 23,000	$ 116,000
F. Capital Equipment									
1. Furniture	$ 5,000	$ 10,000	$ 15,000	$ 5,000	$ 4,000	$ 4,000	$ 4,000	$ 4,000	$ 47,000
2. Audio Visual Equipment	25,000	25,000	40,000	40,000	30,000	30,000	30,000	35,000	225,000
Subtotal:	$ 30,000	$ 35,000	$ 55,000	$ 45,000	$ 34,000	$ 34,000	$ 34,000	$ 39,000	$ 272,000
G. Facilities									
1. Construction	$3,000,000 (Includes shelving, furniture, Electronic Systems, Etc.)								$3,000,000
Subtotal:	$3,000,000								$3,000,000

TOTAL ALL EXPENDITURES: $8,922,450

** Salaries based on Southern California pay scales as of 1979

* Functions:
1. Library facility with total accumulated collection of 100,000 volumes.
2. Acquisitions & Cataloging Department.
3. A.V. Production--graphic, audio, video, etc.
4. Video Circulation--Print, nonprint, AV Equipment, MATV.
5. Reference/collection development & utilization.
6. A.V. Systems design & Equipment maintenance.
7. Staff/instructional Development.
8. Printing & reproduction.

Table II

Services

The following general and specific services will be provided by the library in support of the college library support service to students.

1. Materials Acquisition: Upon request from the Director of Learning Systems & Services of Coastline Community College, materials will be ordered, received,and cataloged. The college will pay for the cost of materials. All materials will be integrated into the library's collection. Certain of the above items may be temporarily removed to expedite circulation if deemed necessary by the Director of Learning Systems & Services.

1. Reference Services: Reference services will be identical for both the library patrons and the college students. No distinction between service to the library or the college patron will be made.

3. Circulation: All Coastline Community College students will have the same circulation privileges as the library patron. Cards and other forms of identification necessary for students to circulate materials will be provided by the library. The college student will be responsible for identifying him/herself as a currently enrolled student by use of a validated student I.D. card.

   The college's materials of special interest may be placed in various stages of restricted circulation with the approval of the Director of Learning Systems & Services and the Director of the Library.

   College materials lost or damaged are not the responsibility of the library. Those materials lost or damaged will be replaced or repaired at the discretion of the Director of Learning Systems & Services.

   Ownership of materials purchased by the college will remain with the college for seven years. After seven years, ownership and responsibility for the maintenance will revert to the library.

4. Audio Visual Equipment: The college student will have full access to audio visual equipment as is normally supplied by the library. The need for additional equipment in support of the college's academic program will be sent to the Director of Learning Systems & Services who will attempt to satisfy those needs by using equipment currently owned by the college or include those requests in the next year's budget projection.

5. Audio Visual Equipment Repairs: The college will be able to have audio visual equipment repaired at the library repair facility. The college will pay for all parts and labor used to repair the college's equipment.

6. Bibliography: Bibliographies for Coastline Community College faculty, not to exceed 10 per year, will be provided as part of the overall service. Any bibliographies above 10 will be paid for by the college on an at cost basis.

7. Promotion: Responsibility for promotion of the concept to the college's student will be the college's.

8. Miscellaneous Services: Miscellaneous services as yet unidentified will be negotiated on an item by item basis.

9. Review: This agreement is subject to annual review by both Coastline Community College and the Huntington Beach Public Library.

Cooperative Arrangement: Coast Community College District

Title of Program: Telecourse Production and Distribution

Participating Institutions:

Coastline Community College
Hundreds nationally

Administrator:

Dr. Peter Vander Haeghen, Director, Learning Systems and Services, Coastline Community College

A. Program:

Since the early 1970s Coast Community College District has been a national leader in the production of comprehensive telecourses. Past history of telecourses has generally included only the television component tied to a textbook. With the advent of the Coast District Instructional Design Team concept, courses began to take on new dimensions.

Some of the key dimensions in a Coast District telecourse include the television productions, textbooks, study guide, instructors, computer support systems, and instructional support systems.

The television portion of a telecourse jumped far ahead from what were considered traditional telecourse production techniques when Coast District began to send film crews throughout the world documenting on film and videotape the concepts that, in the past, had only been described by a lecturer. The use of color, commercial production techniques, and an instructional design team made up of production specialists, content specialists, and instructional design specialists all combined to provide the finest instructional television course materials produced to date.

Another key element of the course is the textbook and study guide combination. Frequently, an existing textbook is selected because of its high quality and ability to cover the content in terms of the course's objectives. Coast Community College District then prepares an appropriate study guide which helps to relate the textbook to the telecourse video portions. These three pieces begin to form the total telecourse system.

Included in the design portion of the telecourse are the text banks. These include quizzes, mid-term and final examinations, recommendations for extra credit activities, plus other suggestions which afford the student an excellent learning experience. Included in the test banks are the prescriptive feedbacks which, when a student misses a question, lets that student know where to find the correct answer in the video and printed materials.

The role of an instructor in a telecourse is considerably different than that of a classroom teacher. No longer is the faculty member at the center of the course as a disseminator of information. Rather, the faculty member becomes another resource which the student may use as a counselor, a motivator, a problem-solver, and a coordinator of the student's activities.

The final component of the telecourse operation's success at Coast District is the CIS Operations support staff. It is made up of supervisory and clerical staff who take care of the coordination of the more than 10,000 students per year in over 60 courses. Mailing, typing, computer interface, and arrangements for midterm and final review exam sessions are all coordinated through this staff. This relieves the instructors of the many clerical duties and lets them direct their energies toward the one-to-one coaching and support of the individual student.

In the attached chart, two levels of courses were analyzed, Level I being the more sophisticated and complex and Level IV being the least sophisticated and least complex. There is little relationship between the level of complexity of the telecourse and the learning experience of the student. The complexity refers to the subject matter and the amount of time and work necessary to develop the materials. The cost of production is directly proportionate to the complexity of the program and not the quality of the learning experience.

Section two of the chart describes the cost attributed to offering one course per semester with the assumption that the course is only offered once in the fiscal year. This may not always be the case. As may be noted, the cost of offering a Level I course and Level IV course is virtually the same because of the kinds of support services required for each individual course.

Section three of the chart describes the cost for marketing these courses on a national basis. This includes all the staff and other resources necessary to provide institutions around the country with information about the individual telecourses. Due to the importance of national marketing, Level I courses cost more to market than others.

Item four of the chart indicates the income generated from the variety of sources applicable to California and the Coast Community College District. In some cases the costs are received from commercial firms in the form of royalties on the sale of materials, both print and nonprint.

Section five deals with other benefits to students and institutions that do not easily fit into the above categories.

The benefits to institutions offering telecourses are numerous. They include the opportunity to serve a population which may not have been part of the postsecondary learning experience for one or more of several reasons. Those people who work a full day and do not feel motivated to drive 10 miles round trip to a class three times a week are strong candidates for the extended form of learning provided by telecourse and other independent study formats. Many times, the family decision to spend evening hours at home with the children overrides the decision for self-improvement through instructional programs at local colleges. These educational opportunities begin "to turn people on" to learning. These people may not have been in classroom situations for 10, 20, or 30 years. They are afraid to enter the classroom for fear the young minds will be able to "run circles around them." The older students have a great deal of self-esteem and a self-image to protect. The classroom setting is much too risky for them to put that self-image on the line. They will take these courses as a first step in proving to themselves that they can perform and earn college credit. In some cases, the students spin off into classroom courses either for their personal edification or re-entry into new career opportunities.

The re-entry students find telecourses a nonthreatening way to re-enter the learning process, to test their mental skills and, finding a successful learning experience, they begin to open new doors for career opportunities and general improvement of their quality of life.

Benefits to the institution and the student also include the ability of an institution to offer the same consistent high quality level of instruction semester after semester at considerably less cost than the normal classroom instructional mode. Faculty members find themselves dealing less and less with the clerical and routine activities associated with classrooms because they have support staffs available to do typing, handle mailings, make arrangements,and do most of the other things faculty become involved in beyond instruction. The students find they have more individual time with faculty members and that they can solve their problems on a one-to-one basis more readily than they would if they were in a normal classroom. This is particularly true for the student who may be shy about asking a "dumb question" in front of the entire class. The faculty deals with content and people in a very personal way. Under the system used at Coastline Community College, faculty members with a six credit hour load can handle over 400 students.

In analyzing telecourses exclusively from the financial perspective of the student, significant potential benefit is observable. Most students probably would not object to paying $10-20 per credit hour for tuition (in states that charge tuition) and $15-20 for textbooks if they knew they could save $90-300 per course and still get some of the finest instruction in the country. That is exactly what they can do by taking telecourses.

Coastline has found that the classroom courses in which students enroll are not only determined by the subject matter and the time at which the courses are offered, but also by the class location. In these days of crowded highways and ever-increasing gasoline prices, getting to and from class can be a costly, time-consuming business. Consequently, at Coastline, the marketing strategy is to inform students that by taking telecourses and other types of independent study courses, they can save time and money. Students actually realize the savings by not doing certain things normally required for classroom-based courses. By not driving an automobile 10 miles round trip to and from campus for 54 trips (54 is the approximate number of class sessions in a semester), a student saves $34.20 (540 miles ÷ 15 mpg average x 95¢ per gallon of gasoline). In addition, another $54 is saved in general operating and maintenance costs (540 x 10¢ per mile) The student saves between 25 and 40 hours of personal time by not doing that driving. If the student valued personal time at around $4.50 per hour, that would add between $112.50 to $180 to the savings figure. The average 15 percent of students who must arrange for child care could save $1.00 an hour, plus more time and gas; another $108. That is a potential of over $300.

When the figures above are projected on a national scale for the 1978-79 academic year, the total savings become astronomical. Multiplying a conservative figure of 125,000 students enrolled in telecourses nationally times 540 (the number of miles each had to drive to and from class) amounts to 67,500,000 miles that would have been driven to and from class last year. That is 4,500,000 gallons of gas or $4,275,000 in gasoline expenses. At a mere 10¢ a mile for automobile operating expenses, students saved another $6,750,000 by taking telecourses and not driving to a campus. Total savings for automobile expenses: $11,025,000.

It seems fair to assume there would have been a cost associated with each person's time, as was indicated in the example given earlier. If $4.50 per hour is used as a norm, the national productivity wasted by driving to class would have been $30,375,000 per year. Added to that would have been child care costs of approximately $2,531,250. Total cost to the nation in nonproductive use of national resources, had these students driven to class, would have totalled around $34,931,250. With a continual stagnation in national productivity, a national energy crisis, and higher costs associated with all products purchased, students, administration, faculty, and political leaders should be made aware of the current importance and future potential of the telecourse concept.

At first glance, the figures quoted above seem enormous. But consider the fact that many of our colleges and universities have annual budgets larger than that. The percentage of students taking telecourses is minute compared to the national enrollments in college credit courses.

At Coastline, between 20% and 25% of the students in the college are enrolled in extended learning courses. If this percentage were projected nationally, the increase in learning and the decrease in wasted valuable resources would be staggering. No implication is intended that all students learn better through telecourses. The classroom instructional mode is still an important instructional option. With the high quality of the new generation of telecourses, universities and colleges all around the country are now able to provide leadership in reducing some of the causes of shortages and low productivity.

B. Cost Analysis:

For the Level I production detailed in Table I, Coastline estimates total income will exceed total expenses for the seven-year period by $521,662. If the original investment of $465,000 by the State of California is deducted, this leaves a net surplus of $56,000 from this course. For the Level IV course, which is designed more specifically for use in California, Coastline would fall short by $40,738 of covering the full $331,950 appropriation by the state. Although some courses, like the Level IV example, may not generate income to equal the state appropriation, the expanded educational opportunity made available to California citizens through this course makes the investment justifiable.

Coastline Community College has demonstrated that there is a need and demand locally and nationally for quality telecourses. Although the initial costs of production and distribution for Coastline are substantial, it is clear that other institutions will lease or purchase these courses and, thereby, help to defray total costs. It is also true that a single institution, such as Coastline, could not design and produce successful and marketable telecourses unless other institutions were eager to lease and purchase the materials. The costs of production would be prohibitive for a single campus. Spread among many institutions, the costs are manageable and the courses become cost effective, not only for the producer (Coastline), but also for the users

COAST COMMUNITY COLLEGE DISTRICT
TELECOURSE PRODUCTION AND DISTRIBUTION
COST ANALYSIS OF PRODUCTION & OPERATION

Level I Productions

	*Design Prod. Phase		Operational					
	1st. Yr.	2nd. Yr.	3rd. Yr.	4th. Yr.	5th. Yr.	6th. Yr.	7th. Yr.	TOTALS
I. Design/Production *								
A. Personnel, (Designers, Academic, Clerical, Production, Technical)	$359,000							$369,800
B. Fringes for Personnel	65,500							65,500
C. Supplies (Graphic, Videotape Sets)	130,450							130,450
D. Facilities (Offices, TV Studios)	200,000							200,000
E. Travel	44,000							44,000
F. Miscellaneous (Telephone, Postage)	5,000							5,000
G. Revision of Test Bank			5,000					5,000
H. Print Materials	14,425							14,425
SUBTOTALS:	$829,175		$ 5,000					$934,175
II. Course Offering								
A. Personnel			$ 4,000	$ 4,000	$ 4,000	$ 4,000	$ 4,000	$ 20,000
B. Fringes			1,000	1,000	1,000	1,000	1,000	5,000
C. Supplies (Office, Video Tape)			300	300	300	300	300	1,500
D. Facilities			50	50	50	50	50	250
E. Printing & Postage			500	500	500	500	500	2,500
F. Equipment			1,000	25	25	25	25	1,100
G. Computer Support (10%)			4,000	4,000	4,000	4,000	4,000	20,000
SUBTOTALS:	$		$ 10,850	$ 9,875	$ 9,875	$ 9,875	$ 9,875	$ 50,350
II. Marketing (National)								
A. Personnel			$ 2,000	$ 1,700	$ 1,200	$ 1,300	$ 1,000	$ 6,900
B. Fringes			500	425	300	250	250	1,725
C. Supplies			100	100	50	50	50	350
D. Facilities			-0-	-0-	-0-	-0-	-0-	-0-
F. Printing & Postage			1,000	1,000	1,000	1,300	1,000	5,000
F. Telephone			500	500	400	300	200	1,900
G. Travel			600	600	500	500	500	2,700
H. Dubbing, (1,550 x 30)			46,500	31,000	23,250	23,150	38,750	162,750
SUBTOTALS:	$		$ 51,200	$ 35,325	$ 26,700	$ 26,350	$ 41,750	$181,325
IV. Income								
A. Number of Students -- Coastline			700 enr	650 enr	625 enr	575 enr	560 enr	3,100
B. ADA (Average Daily Attendance)			350	325	312.5	287.5	275	1,550
C. State Apportionment			$105,000	$ 97,500	$ 93,750	$ 86,250	$ 82,500	$465,000
D. Textbook Royalties			10,944	15,744	20,400	26,900	20,250	93,738
E. Film Sales Royalties				84,678	110,393	126,349	109,614	440,534
F. Course Leasing			117,500	120,000	133,750	158,750	156,250	686,250
G. Book Store			348	416	400	368	352	1,884
SUBTOTALS:	$		$233,892	$318,338	$358,693	$407,517	$368,964	$1,687,506

Income from #I -- $1,687,506
minus
Production & Operating Costs -- 1,165,856
(from I, II, & III)
Total Difference $ 521,662

	1st. Yr.	2nd. Yr.	3rd. Yr.	4th. Yr.	5th. Yr.	6th. Yr.	7th. Yr.	TOTALS
V. Other Benefits								
1. Institutional								
A. Reduced Office Space Needs			$ 600	$ 600	$ 600	$ 600	$ 600	$ 3,000
B. Lower Faculty Costs			2,000	2,000	2,000	2,000	2,000	10,000
C. No Classroom Facilities			3,200	3,200	3,200	3,200	3,200	16,000
SUBTOTALS:	$		$ 5,800	5,800	5,800	5,800	5,800	29,000
2. Savings To The Student In:			National Figures					
A. Gasoline (10 miles round trip to campus = 54 trips, 15 mpg & $1.00 gal. = 36/student - $36.00/student) — Gal. Gas			205,200	293,100	382,500	470,700	379,800	1,731,600
Dollars			$205,200	$293,400	$382,500	$470,700	$379,800	$1,731,600
B. Wear & Tear on Auto ($.10 a mile $5.00 per student)			307,800	440,100	573,750	700,050	569,700	2,591,400
C. Child Care (15% of Students require child care--$24.50 per student including mileage)			80,797	114,317	150,609	18[illegible],338	149,549	681,110
D. Frequent Review			Unable to figure due to subjective need of the student					
SUBTOTALS:	$		$591,797	$832,317	$1,106,359	$1,35[illegible],088	$1,099,049	$5,004,110
[illegible] for travel 1.2 hr class - 27 hrs/student) — HRS			153,900	220,050	286,375	35[illegible]25	284,350	1,298,700

*Initial production funds may be royalties advances from anticipated Income as noted in #IV below.

Level IV Production

	Design Prod. Phase *	Operational					
	1st. Yr.	2nd. Yr.	3rd. Yr.	4th. Yr.	5th. Yr.	6th. Yr.	TOTALS
I. Design/Production							
A. Personnel	$ 20,000	$					$ 20,000
B. Fringes for Personnel	7,500						7,500
C. Supplies	15,000						15,000
D. Facilities	20,000						20,000
E. Travel	1,000						1,000
F. Miscellaneous	1,000						1,000
G. Revision of Test Bank		1,000					1,000
H. Print Materials	3,000						3,000
SUBTOTALS:	$ 67,500	$ 1,000					$ 60,000
II. Course Offering							
A. Personnel		$ 4,000	$ 4,000	$ 4,000	$ 4,000	$ 4,000	$ 20,000
B. Fringes		1,000	1,000	1,000	1,000	1,000	5,000
C. Supplies (Office, Video Tape)		300	300	300	300	300	1,500
D. Facilities		50	50	50	50	50	250
E. Printing & Postage		500	500	500	500	500	2,500
F. Equipment		25	25	25	25	25	1,100
G. Computer Support (10%)		4,000	4,000	4,000	4,000	4,000	20,000
SUBTOTALS:		$ 10,850	$ 9,875	$ 9,875	$ 9,875	$ 9,875	$ 50,350
II. Marketing (National)							
A. Personnel	$	$ 1,500	$ 1,300	$ 1,000	$ 900	$ 900	$ 5,600
B. Fringes		375	325	250	225	225	1,400
C. Supplies		100	100	100	100	100	500
D. Facilities		-0-	-0-	-0-	-0-	-0-	-0-
F. Printing & Postage		300	300	300	300	300	1,500
F. Telephone		200	200	200	200	200	1,000
G. Travel		300	300	300	300	300	1,500
H. Dubbing		6,200	4,650	4,670	7,750	10,850	34,100
SUBTOTALS:	$	$ 8,975	$ 7,175	$ 6,800	$ 9,775	$ 12,875	$ 45,600
IV. Income							
A. Number of Students		713	510	367	325	300	2,215
B. ADA		356	255	183.5	162.5	160	1,107.5
C. State Apportionment		$106,800	$ 76,500	$ 54,900	$ 48,750	45,000	331,950
D. Textbook Royalties		-0-	-0-	-0-	-0-	-0-	-0-
E. Film Sales Royalties		-0-	-0-	-0-	-0-	-0-	-0-
F. Course Leasing		15,000	13,110	22,750	31,250	40,750	122,860
G. Book Store		112	81	58	52	48	352
SUBTOTALS:	$	$ 12,313	$ 89,691	$ 77,708	$ 80,052	$ 85,798	$ 455,162

*Initial production funds may be royalties advances from anticipated Income as noted in #IV below.

Income from #IV -- $455,162
minus
Production & Operating Costs -- 163,950
(from I, II & III)
Total Difference $291,212

	1st. Yr.	2nd. Yr.	3rd. Yr.	4th. Yr.	5th. Yr.	6th. Yr.	TOTALS
V. Other Benefits							
A. Reduced Office Space Needs		$ 600	$ 600	$ 600	$ 600	$ 600	$ 3,000
B. Lower Faculty Costs		2,000	2,000	2,000	2,000	2,000	10,000
C. No Classroom Facilities		3,200	3,200	3,200	3,200	3,200	16,000
SUBTOTALS:		$ 5,800	5,800	5,800	5,800	5,800	29,000
2. Savings To The Student In:		National Figures					
A. Gasoline — Gal. Gas		47,268	41,256	70,812	83,700	100,000	343,836
Dollars		$47,268	$41,256	$70,812	$83,700	$100,000	$343,836
B. Wear & Tear on Auto		70,902	61,884	106,218	125,550	151,200	515,754
C. Child Care		18,611	16,244	27,082	32,956	39,690	135,383
D. Frequent Review		Unable to figure due to subjective need of the student					
SUBTOTALS:		$136,781	$119,384	$204,112	$242,206	$291,690	$994,973
HRS		35,451	30,342	53,109	62,775	75,003	257,877

Cooperative Arrangement: Auraria Higher Education Center (AHEC)

Title of Program: Auraria Higher Education Center

Participating Institutions:

Community College of Denver/Auraria
Metropolitan State College
University of Colorado at Denver

Administrator:

Mr. Daniel K. Paulien, Director of Planning and Student Auxiliary Services, Auraria Higher Education Center

A. Program:

The Auraria Higher Education Center is one of the most innovative educational concepts in the nation. Three institutions, each offering "distinctly different yet compatible programs to an extensive range of students" are located on a single campus.

The idea for AHEC emerged in the early 1960s. In 1965, Metropolitan State College became Denver's first urban college and, in 1970, the central campus of the Community College of Denver was opened. A third institution, the Denver Center of the University of Colorado, had been operating in downtown Denver for a number of years and offered numerous graduate programs. The Colorado Commission on Higher Education, created in 1965, was the first official group to recommend that the three institutions, each of which needed a campus, be placed on a single site. The first concept was to have three separate campuses around facilities that would be used in common, such as a library, gymnasium, and student center. The final decision, however, was to construct one campus and create a coordinating mechanism - The Auraria Higher Education Center.

Construction of the campus began in 1973. The Community College of Denver/Auraria opened for classes in 1976 and Metropolitan State College opened in 1977.

Issues related to coordination between institutions and management of the single campus have been central as the Auraria Center has developed. In 1974, the legislature granted statutory authority over non-academic areas to the Auraria Board. However, there were still many gray areas. Although AHEC clearly had authority for parking, building maintenance, security, and bookstore, there were other functional areas where primary responsibility for management and operation needed to be defined. In 1974, the three campus Presidents met and agreed to a division of responsibility. The University of Colorado was to be responsible for the library, Metropolitan State College for the physical education facility, the student center, and the child care center, and the Community College of Denver for the media center. In 1978, AHEC, which had issued the bonds to construct and maintain the student facilities, assumed direct management of the student center and the child care center.

B. Cost Analysis:

Two examples of cost savings/avoidance are presented in this study. The first is a specific example of successful cooperation, the Auraria libraries. The second example details the FTE costs for comparable public institutions in Colorado.

1. Auraria Libraries (merged in 1976)

   The Auraria Libraries are housed in one new structure on the Auraria campus. The "libraries" are, in fact, one library under the management of a single Director who is an employee of the University of Colorado.

   Without an item by item analysis, it would be difficult to identify all of the savings from this cooperative arrangement, but the following represents the major categories.

Cost avoidance:	$235,000
Computer hardware (one mainframe in lieu of three)	$235,000
Ohio College Library Center terminals	7,400
Printer for OCLC terminals	3,000
Expensive duplicate materials (12,000 items)	151,000
Expensive duplicate periodical titles	32,000
	$428,400
Cost savings:	
Two directors' salaries	$ 60,000
Four specialized librarians	64,000
Equipment	15,000
Supplies	41,000
Computer telecommunication costs	43,000
	$223,000
Total	$651,400

The cost avoidance/savings of the Auraria Libraries is approximately $650,000 per year. In addition, there are benefits which cannot be measured solely in monetary terms. The elimination of the need to purchase duplicate sets of periodicals and reference books for separate libraries allows the Auraria Libraries to purchase many additional materials (books, periodicals, reference, media, etc.) The collection development of the single large library has been far more efficient and cost effective than three small libraries. Furthermore, the core collection is not only larger, it is more varied. Finally, consolidation in one facility has eliminated the need for duplicate computer and security systems.

2. Operational Costs

Included in the appropriation figures for the Auraria institutions are the pro-rata share of the AHEC operating budget. The total budget for AHEC is shown in Table I.

Table I

AHEC Operating Budget

1976-77	1977-78	1978-79
$1,973,649	$2,325,677	$3,010,222

The AHEC budget was pro-rated among the three institutions on the basis of full-time equivalent students served by each institution. This percentage allocation is shown in Table II.

Table II

Institutional Percentage of Total Auraria FTE's

	1976-77		1977-78		1978-79	
	FTE	%	FTE	%	FTE	%
UCD	5,200	26.9	5,260	28.2	5,400	28.9
MSC	10,500	54.3	10,030	53.7	10,030	53.7
CCD	3,633	18.8	3,387	18.1	3,256	17.4
	19,333	100.00	18,677	100.0	18,686	100.0

Table III shows the dollar allocations from the AHEC budget (Table I) to each institutional budget based on the percentage derived in Table II. Thus, Table III shows the actual total costs of operation for each institution with the AHEC budget identified in the institutional budgets.

Table III

Allocation of AHEC Budget to Institutions

	1976-77	1977-78	1978-79
UCD			
Appropriation	$ 7,443,022	$ 8,096,024	$ 9,137,703
AHEC	530,911	655,841	869,954
Total	$ 7,973,933	$ 8,751,865	$10,007,657
MSC			
Appropriation	$10,675,661	$11,882,915	$13,202,182
AHEC	1,071,691	1,248,888	1,616,489
Total	$11,744,352	$13,131,803	$14,818,671
CCD			
Appropriation	$16,665,456	$16,259,378	$16,291,586
AHEC	371,046	420,948	523,779
Total	$17,036,502	$16,680,326	$16,815,365

The full-time equivalent cost for the annual operation from 1976-77 through 1978-79 of the three institutions (University of Colorado at Denver, Metropolitan State College, and Community College of Denver) is shown in Table IV.

Among the public doctoral-granting universities, University of Colorado at Denver has an FTE cost substantially lower than the other four institutions. In the most recent year, UCD was 45.1% lower than the FTE cost of the highest cost institution and the institution with the second lowest cost per FTE was 9.0% higher than UCD.

Although the FTE costs were not as widely dispersed among the four-year state colleges, Metropolitan State had the lowest FTE cost in 1978-79 at

$1,478. This was 26.3% lower than the highest cost institution and 14.5% lower than the institution with the second lowest cost.

Analysis of the Auraria campus of the Community College of Denver is difficult because the detailed budgets for each campus are not available. However, the costs for the three campuses of the Community College of Denver are moderate in comparison to other community colleges in Colorado. For example, in 1978-79, CCD was 37% lower in FTE cost than the institution with the highest cost per FTE. Although two community colleges had a lower per FTE cost than CCD (ranging from 7.4% to 9.4% lower), the other community colleges ranged from 12.5% to 34% higher cost per FTE than CCD.

C. Summary of Benefits

The Auraria campuses have demonstrated a number of cost effective and related benefits.

1. Duplication of expensive physical facilities and related services has been eliminated. This has allowed the campuses to keep their FTE costs at the lower end of the scale for comparable institutions in Colorado.
2. Educational opportunity has been expanded, especially for the residents of Denver. Prior to the opening of Metropolitan State College, there was no public state college in Denver.
3. Geographic access has been enhanced. A large number of students are attending because Auraria is convenient. The average age of students at the three institutions is 28, indicating a population less mobile and less likely, therefore, to be able to travel to another institution.
4. Access for minorities has been increased. Minorities (American Indian, Black, Asian, and Hispanic) comprise 32.2% of CCD/Auraria's student population, 17% of Metropolitan State's, and 13.4% of the University of Colorado's at Denver.
5. There is an exceptional breadth of course and degree offerings at the Auraria campuses, ranging from certificates through doctorates. A total of 148 different majors are listed in the "Report on Organizational Relationships" (December, 1978), II 34-36, issued by AHEC. These majors lead to a combination of 205 certificates/degrees (23 certificates, 43 associates, 96 bachelors, 42 masters, and one doctorate).
6. Auraria offers the opportunity for place-bound students to begin their education at one institution and continue it in another program and institution, but at the same location.

Table IV

Comparative Costs per FTE
1976 - 1979

	1976-77	1977-78	1978-79
Doctoral-Granting Universities			
University of Colorado at Denver			
Appropriation*	$7,973,933	$8,751,865	$10,007,657
Enrollment	5,200	5,260	5,400
Tuition	$364	$421	$463
Cost per FTE	$1,534	$1,664	$1,853
University of Colorado at Boulder			
Appropriation	$52,632,977	$55,901,944	$58,647,235
Enrollment	20,223	20,157	20,157
Tuition	$578	$614	$666
Cost per FTE	$2,603	$2,773	$2,910
Colorado State University			
Appropriation	$41,282,584	$43,257,423	$49,386,083
Enrollment	17,689	17,634	17,210
Tuition	$521	$549	$565
Cost per FTE	$2,334	$2,453	$2,579
University of Northern Colorado			
Appropriation	$19,509,275	$21,514,310	$23,772,527
Enrollment	11,608	11,609	11,770
Tuition	$386	$430	$478
Cost per FTE	$1,681	$1,853	$2,020
Colorado School of Mines			
Appropriation	$7,700,570	$8,455,837	$9,782,339
Enrollment	2,609	2,777	2,900
Tuition	$386	$430	$478
Cost per FTE	$2,952	$3,045	$3,373
Other Four-year State Colleges			
Metropolitan State College			
Appropriation*	$11,747,352	$13,131,803	$14,818,671
Enrollment	10,500	10,030	10,030
Tuition	$263	$317	$356
Cost per FTE	$1,119	$1,309	$1,477
Adams State College			
Appropriation	$4,825,734	$4,926,701	$4,912,372
Enrollment	2,800	2,700	2,450
Tuition	$403	$443	$502
Cost per FTE	$1,723	$1,825	$2,005

*Includes pro-rata share of Auraria Higher Education Center operations appropriation

	1976-77	1977-78	1978-79
University of Colorado - Colorado Springs			
Appropriation	$4,396,824	$4,971,396	$5,461,513
Enrollment	2,700	2,850	3,000
Tuition	$377	$424	$451
Cost per FTE	$1,628	$1,744	$1,821
Fort Lewis College			
Appropriation	$4,550,541	$4,799,620	$5,355,886
Enrollment	3,100	3,100	3,100
Tuition	$350	$381	$450
Cost per FTE	$1,468	$1,548	$1,728
Mesa College			
Appropriation	$4,621,000	$4,751,058	$5,154,966
Enrollment	3,100	2,743	2,870
Tuition	$367	$424	$452
Cost per FTE	$1,491	$1,805	$1,796
Western State College			
Appropriation	$4,864,893	$5,234,682	$5,819,778
Enrollment	3,100	3,200	3,200
Tuition	$337	$395	$421
Cost per FTE	$1,569	$1,636	$1,819
University of Southern Colorado			
Appropriation	$9,673,252	$10,138,842	$10,688,093
Enrollment	5,600	5,600	5,450
Tuition	$412	$438	$473
Cost per FTE	$1,727	$1,811	$1,961
State Community Colleges			
Arapahoe Community College			
Appropriation	$4,325,036	$4,797,648	$5,371,390
Enrollment	3,400	3,600	3,700
Tuition	$243	$288	$337
Cost per FTE	$1,272	$1,333	$1,452
Pikes Peak Community College			
Appropriation	$5,643,838	$5,710,939	$6,456,317
Enrollment	4,350	4,350	4,350
Tuition	$293	$288	$337
Cost per FTE	$1,297	$1,313	$1,484
Lamar Community College			
Appropriation	$907,463	$941,241	$1,019,123
Enrollment	500	475	475
Tuition	$243	$288	$337
Cost per FTE	$1,815	$1,982	$2,146

	1976-77	1977-78	1978-79
Morgan Community College			
Appropriation	$521,943	$559,046	$585,651
Enrollment	321	325	325
Tuition	$243	$288	$337
Cost per FTE	$1,626	$1,720	$1,802
Otero Junior College			
Appropriation	$11,469,874	$1,524,057	$1,577,563
Enrollment	750	675	620
Tuition	$243	$288	$337
Cost per FTE	$1,960	$2,258	$2,544
Trinidad State Junior College			
Appropriation	$2,181,831	$2,241,501	$2,338,917
Enrollment	1,250	1,200	1,200
Tuition	$243	$288	$337
Cost per FTE	$1,745	$1,868	$1,949
Community College of Denver (3 campuses)			
Appropriation**	$17,036,502	$16,680,326	$16,815,365
Enrollment	12,200	12,200	10,500
Tuition	$243	$288	$337
Cost per FTE	$1,396	$1,367	$1,602

Definitions: Appropriation - total state legislative appropriation excluding capital construction and rental allocations.
Enrollment - total budgeted FTE
Tuition - full-time instate
Cost per FTE - appropriation divided by enrollment

**Includes pro-rate share of Auraria Higher Education Center operating appropriation for all three CCD campuses as CCD-Auraria is not appropriated for separately.

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CHAPTER VII

COOPERATIVE ACADEMIC PROGRAMS

INTERINSTITUTIONAL COOPERATION IN ACADEMIC PROJECTS

For the large majority of American colleges, the enrollment declines predicted for the next decade have only just begun. As these declines become more and more widespread, pressures on low-enrollment departments and programs will intensify. It is all but certain that many examples of interinstitutional academic cooperation will be proposed and, perhaps, come into being as an alternative to program elimination.

Are the guidelines and case studies in this report (almost all of which came about during eras of expanding or steady enrollment) relevant to the sorts of pressures the 1980s will bring? On the whole, the team members who investigated cooperation in academic areas are convinced that the answer is "yes". However, sudden decisions, made by top academic administrators who have not had a good base of planning which has involved faculty from the affected departments, are not likely to achieve success. This will be true regardless of the special pressures enrollment declines may bring to bear.

Institutions in close enough proximity to make academic cooperation feasible should begin now to discuss ways of working together, many of which may lead to steps well short of merging into joint departments. Such joint departments or programs, as the case studies in this report show, can work, do result in cost effectiveness, and have additional advantages as well. They do not, though, even begin to exhaust the productive ways in which institutions can cooperate academically.

Joint academic long-range planning studies (like the pilot studies in English and physics carried out at Tri-College University) are promising in several ways:

- By involving faculty members from the departments concerned, such studies can reflect the curricular concerns of the people closest to the teaching situation;

- By involving faculty members from the departments concerned, recommendations emerging are seen by the departments as ideas generated by the faculty, rather than something imposed by administrations;

- In many departments, the flexibility attained from working with more than one institution can help minimize the impact of enrollment declines and attendant faculty cuts (for example, a specialist in Romantic poetry at one college might be used to replace - part-time - a retiring counterpart at another college, instead of being cut altogether by the home institution);

- As a general rule, it is much easier to plan and implement faculty and (if necessary) program cuts over a longer period of time than it is over a shorter period. By conducting such joint long-range academic planning, faculty fears and concerns about the 1980s can, in many cases, be soothed, if not allayed. Careful planning and judicious action to replace (or not replace) retirees and those who leave for other reasons can allow departments to conduct orderly retreats, instead of being faced with routs.

In the introductory section of this study, NACUBO representative Tom James discussed difficulties encountered in the collection of hard data. Lack of uniform terminology, great variance in accounting systems, and practically no inclusion of indirect costs at individual institutions in determining project costs posed difficult problems. Site visits to cooperative academic projects found all of these problems in existence. An interesting variable in academic projects, however, came from Deans and Presidents who stated that they can percieve that a cooperative program would be more cost effective than an individual one without hard data to support their perceptions. Such an attitude is understandable, since they are already familiar with faculty costs, costs which constitute the largest proportion of direct academic program costs. However, it is hoped that one of the ideas which will be disseminated by the CIL study is that setting up the financial aspects of a joint academic program is not difficult (experienced college administrators can accomplish it without reams of computer printouts) and having financial management in place and agreed upon is just as valuable to an established cooperative venture as it is to one that is still in the planning stage.

During site visits to academic projects, the investigators found a wide range of attitudes: complete openness from some administrators who had hard data available and also from some administrators with no more than a willingness to collect the hard data; some administrators conveyed confusion and uncertainty, even annoyance, in attempting to comply with requests for data, to others, the need for hard data seemed burdensome and was considered almost irrelevant to the success of cooperative projects. Several instances of existing programs were found for which data were so sketchy that they were valueless, yet Deans stated that they were satisfied that the projects were cost effective and would not dream of discontinuing them.

A primary finding in the investigation is that the major consideration in the implementation operation of many cooperative programs is not often the case of a joint academic program's being cheaper than an individual program; it is a case of the program's being impossible to establish/maintain if not operated cooperatively.

Case studies which follow include projects which were once supported individually by institutions but are now supported cooperatively and, also, those which originated as a joint effort. The studies reflect various modes of management and a variety of academic settings. They present a synthesis of information which concentrates on costing. For institutions wishing to use any particular program as a model, more detailed information would be necessary. In addition to the case studies themselves, a brief discussion of three other types of projects is included:

- Those which have not been in existence for a long enough period of time to generate sufficient data to evaluate cost effectiveness;

- Projects in which institutions, already working in a consortium setting, have decided not to implement desired new majors now in existence at a member institution, but rather to make them available through the consortium;

- An instance where a college discontinued a major because of its high cost and arranged for students to take the work at another consortium institution.

The site visitors found so much potential and general applicability in these projects, it was the consensus that to omit them would be an injustice to people sincerely interested in the constructive possibilities of cooperation in the academic area. These are areas which CIL hopes to study further.

Cooperative Academic Programs
Guidelines

There are many kinds of possible joint academic programs. These guidelines are based on the assumption that the cooperative program being considered is likely to be one similar to those found in the case study reports from Tri-College University, Five Colleges, or the Claremont Colleges: a cooperative program essentially similar in scope to an academic department. Other sorts of academic cooperation are possible, of course (e.g., Quad-Cities Graduate Center, West Central Wisconsin Consortium, Greensboro Regional Consortium), and faculty and administrators should have little trouble in adapting these guidelines to their particular purposes.

Keep in mind that the answers to questions raised by faculty and administrators considering establishing a cooperative academic program generally are not to be found by studying any one particular model. Study of a variety of models, however, can help define appropriate areas of concern to be addressed by faculty and administrators and can provide valuable examples of the sorts of activities required in such an effort.

Not every academic program can be improved by a cooperative effort. Autonomy is a good; competition can be a strength. Having decided to attempt a cooperative program, however, university or college leaders should understand that no guidelines, no models, and no set of existing program practices can substitute for common sense among faculty and administrators working to establish a joint academic program in their own campus communities.

Institutions joined together in a formal consortial arrangement may find that new modes of academic cooperation come easier because of such existing structures. These guidelines try not to assume that a consortium already exists, however.

A. General Introductory Comments:

1. Always go through the regular review and approval channels of each participating institution. Be certain that these processes involve both faculty and administrators, since both must support the program if it is to be successful. These steps may prove cumbersome, but they establish the best groundwork for the long-term success of any joint program. Also, such thorough initial review may prove valuable in illuminating problems which can be solved with later work.

2. Establish governance and other procedural details formally and in detail sufficient to make the cooperation effective and to satisfy the concerns of faculty and administrators. Although one should not expect to create a perfect system (especially in the first attempt), it is essential that all concerned have a clear understanding, in writing, of what has been included in the agreement. Experience has proved that it is good will and a willingness to combine broad program concerns with adherence to a detailed system which makes for a successful program environment.

3. The above point is true especially with regard to finances. Make this aspect of any joint program proposal or agreement extremely clear and follow established procedures scrupulously (or get complete approval to do otherwise).

4. It generally is valuable to have available to the faculty and administrators involved in the cooperative program at least one relatively disinterested person who can assist with planning and administration. This is a major advantage of a formal consortium, which generally includes a professional who serves the interests of the group, rather than those of any single institution.

5. As the planning begins, and at each significant step, it is important to have the support of the institutional chief executives, but it is even more vital to insure the involvement and support of the chief academic officers.

6. A major difficulty in planning an interinstitutional project is the general lack or unavailability of comparable data. Many separate institutions have had no need to collect and represent some of the data which would be helpful in cooperative planning. Even when helpful data are available from the separate institutions, different techniques of data generation may have been used and they may not have reported data in similar ways.

7. Interinstitutional cooperation involves many levels of activity and brings together a complex mix of priorities, expectations, and people. Planners should not overlook the politics of campus, city, region, and/or state which may be involved in cooperation.

B. Planning:

How will the initial planning for a new cooperative academic program be accomplished?

1. Issues to be addressed:

   - Should the planning be done by faculty members from the departments involved? By faculty members from other departments? By administrators? Or by a mix of the above groups?

   - Should planning time and effort be done on a paid overload basis? On a released-time basis? Or on an unpaid overload basis?

   - Should the planning groups have a detailed charge or a general one? What kind of document are they to produce? For whom are they writing? How often should they meet and how should they communicate? Should they have a clearcut timetable for their work?

   - What kinds of support will be appropriate for the committee's work (secretarial services, data gathering help, other)?

2. The Ideal:

- Good faculty members from all the departments involved come up with the idea for cooperation in a new joint academic program and express willingness to do some planning.

- Faculty are appointed to a planning body and are given a clear and detailed charge, including a timetable. They submit a detailed proposal for the cooperative program to appropriate academic administrators and review bodies. The planning committee meets regularly and face-to-face.

- The faculty are given released-time and appropriate kinds of support in their efforts.

C. The Decision-Making Process For Gaining Approval:

Once a plan for a new joint academic program has been developed, who should be asked to review and approve it?

1. Issues to be addressed:

- Are institutional procedures for gaining approval of a cooperative academic program established and clear?

- Is there a formal consortial arrangement already in existence among the institutions involved, and, if so, are its procedures for approving a new cooperative academic program established and clear?

- If a formal consortium exists, do its procedures for new program approval short-circuit the steps a new program on an individual campus would have to go through or do its procedures incorporate and supplement those individual campus steps?

2. The Ideal:

- A formal consortium agreement exists among the involved institutions.

- Both the consortium's and the member institutions' procedures for review and approval of a new cooperative academic program are established and clear.

- The consortium's procedures for approving new programs are in addition to (rather than in place of) the procedural requirements of the individual member institutions.

- A proposal for a new cooperative academic program is reviewed on each campus according to that campus's governance procedures and is reviewed also by the consortium in accordance with its governance procedures.

D. Governance:

1. Issues to be addressed:

- If no formal consortium exists among participating institutions, what sorts of governance bodies and procedures will have to be established to coordinate a new joint academic program?

- If a formal consortium already exists, are changes in or additions to its governance structure necessary to accommodate the new joint academic program?

2. The Ideal:

There are a number of variables here which effect the seriousness with which new governance bodies and procedures need be considered. Is the program under discussion a degree program? If so, is it a graduate degree or an undergraduate degree? If not, is it a major program, a minor program, a general education program, or just some cooperative courses?

- If the proposed cooperative academic program leads to a minor or is just a series of cooperative courses, no new governance structures are required in most cases. Department chairmen and deans probably can handle things.

- If the proposed cooperative academic program leads to a major or to a degree, it is likely that a joint committee should be created. Such a body certainly should include faculty members from the cooperating departments of the institutions involved. It may include faculty members from other departments, administrators, or students.

- If a new governance body is created, it is important that all understand how it related to existing governance procedures and bodies of the consortium and of the separate institutions.

E. Finances:

1. Issues to be addressed:

- How are budgets proposed?

- How are budgets approved?

- How are budgets spent?

2. The Ideal:

- No single model can be termed ideal as in the other areas outlined above. It is important that financial practices developed or implemented in relation to the cooperative academic program be compatible with existing practices within the consortium and the participating institutions.

- It is essential in a cooperative venture that all participants understand and agree to the financial model to be used.

F. Faculty:

1. Issues to be addressed:

- Are faculty to remain employees (in the full sense) of their home institution, or are they to become employees of the new cooperative program or the sponsoring consortium? Is their status to rest somewhere between these two extremes?

- If faculty become employees of the new cooperative program or of the consortium, the following issues need to be anticipated and addressed:

  a. What job security do the faculty members have to give up? What job security do they acquire?

  b. Who determines salary, rank, tenue? Is the faculty member, in regard to any of these conditions of employment, at a comparative disadvantage to "regular" institutional faculty members?

  c. What means of redress/grievance does the faculty member have for concerns about items in b. (above) or for other concerns?

  d. Will faculty feel isolated if employed in a non-traditional or consortium setting?

- If faculty remain employees of their home institutions, the following issues need to be anticipated and addressed:

  a. Will colleagues in the faculty member's home institution who are responsible for salary, rank, and tenure also have supervision of the day to day work? If not, will the faculty member suffer from being employed and evaluated by one unit and actually working in a different program?

  d. How can the new cooperative academic program command the loyalty and devotion of the faculty member if all key personnel decisions are made by the faculty member's home institution?

2. The Ideal:

- Faculty members retain their appointments (tenure, rank, seniority, etc.) at their home institutions, with special appointment to the new program.

- Care is taken to assure that faculty are not penalized for working in a cooperative program. Appeal procedures for faculty use are well defined.

G. Space/Setting:

1. Issues to be addressed:

   - Will the new joint program have its own office and facilities or will these be scattered among the various departmental offices of the participating institutions?

   - If the new program does not have its own space, how will program identity be achieved?

   - If the new joint program does have its own space, will faculty and program administrators spend all their time in the new program's office?

2. The Ideal:

   - Although program elements and facilities requirements vary greatly depending on whether it involves the laboratory sciences, the traditional liberal arts, cooperative education (internships), etc., some aspects of the ideal are:

     - The new program has at least a "headquarters office" (perhaps that of a faculty member) to facilitate identity and easy communication.

     - Faculty and administrators move regularly among the various facilities used by the new program, being especially careful to maintain regular personal contact with personnel on all participating campuses.

H. Long Range Planning:

1. Issues to be addressed:

   - How will planning be accomplished?

   - How will planning allow for necessary change in the program?

   - What notice will be taken of requirements and preferences of various accrediting groups?

2. The Ideal:

- A responsible, well-established committee conducts long-range planning for the program which is compatible with that of the participating institutions. The planning group includes faculty and administrators. Because new joint academic programs are likely to be more visible and receive more attention from faculty and administrators, clear goals and objectives are probably even more important than they are for more traditional programs. It is necessary that everyone concerned shares expectations for the new program.

- The responsible committee understands that a new cooperative program will undoubtedly require changes and modifications as time passes. Everyone expects this and is not alarmed by the need for change in the original plans and procedures.

- Organizers and planners are aware of the requirements and/or preferences of accrediting groups (regional, professional or governmental) which apply to the program. Serious consideration is given to these elements as the program is planned, even if there is no present expectation that formal accreditation will be sought.

Academic Program Cost Study Format

Several of the cost studies included in this chapter on cooperative academic programs have been accredited in their own right. Consequently, the program analyzers used an organizational format to present cost study data that is more technically structured than the general organizational format that was followed in the five other program areas covered in this report.

The organizational format that follows is an adaptation of one used by the West Central Wisconsin Consortium and the University of Wisconsin System for regional and state review of institutional programs.

PROGRAM REVIEW DOCUMENT

A. PROGRAM IDENTIFICATION

1.1 Exact Title or Descriptive Name of Program/Service:

1.2 Administration: Name, title, and institution of person(s) with administrative responsibility for this program.

1.3 Participants: Institutions and departments or units within institutions which participate in the program.

1.4 Provide full-time and part-time headcount and FTE enrollment for each participating institution for the current year.

B. PROGRAM OBJECTIVES

2.1 Objectives: State the objectives the program/service is designed to accomplish.

2.2 Descriptive Information: Include copies of catalogues, brochures (as applicable).

C. CONTEXT

3.1 History of Program: Provide a brief chronological record of this program: establishment, significant additions or changes, etc.

3.2 Relation to Institutional Objectives/Plans (if applicable): Describe how the program/service relates to the institutional and departmental missions and academic plans.

3.3 Could or would this program/service be offered if the consortium or similar cooperative arrangement did not exist? If yes, at which institution(s)? Explain.

D. PROGRAM/SERVICE USE (where applicable)

4.1 Program Enrollment: Provide enrollment statistics for the current year. Explain the basis for past and estimated future growth or decline.

4.2 Enrollment Capacity: Does the program have the capacity to absorb increased enrollment without significant added costs? If so, to what extent?

4.3 Statistical Data: Give data which shows such things as volume and patterns of use of this program/service, for at least three years.

E. PERSONNEL

5.1 Faculty Participating in Program: Indicate the number and home institution of FTE positions assigned to the program.

5.2 Academic Staff: Indicate the number (FTE) of academic staff members (administrators, research associates, specialists, etc.) who are part of this program.

5.3 Classified Staff: Provide information requested in 5.2 for classified staff (support and clerical, eg.).

F. MEASURES OF PROGRAM STRENGTH

6.1 Accreditation Status: If accreditation is needed and has been attained, provide the name of the accrediting agency, date accreditation was granted, and frequency of accreditation review. If accreditation is needed and has not yet been attained, describe the current status of the program with regard to gaining accreditation. Indicate whether accreditation is not needed or not available.

6.2 Certification: If the program serves the purpose of teacher training, indicate status of/or plans for appropriate certification.

6.3 Recognition by National Societies: Indicate any recognition, apart from formal accreditation, that professional or honorary societies have given to the program.

6.4 Other Measures of Program/Service Strength:

G. FINANCIAL

7.1 Total Program Costs: Show on the attached chart the total costs of the program.

7.2 Outside Funding: Indicate the amount and source of external funding currently available to this program.

H. List the advantages and disadvantages resulting from this program/service for:

8.1 Students
8.2 Institutions
8.3 Funding sources

A. PROGRAM IDENTIFICATION - New Orleans Consortium

1.1 Title of Program: New Orleans Consortium Department of Social Work

1.2 Administrator: Mr. John Fulwiler, Chairman, Consortium Deans' Committee, New Orleans Consortium

1.3 Participants:

Loyola University
St. Mary's Dominican College
Xavier University

B. PROGRAM OBJECTIVES

2.1 Objectives:

To utilize the combined resources of the member institutions and to provide an accredited baccalaureate degree program in Social Work.

C. CONTEXT

3.1 Brief History of the Program:

In 1967, institutional representatives discussed the need for a curriculum in Social Welfare which would assist in providing personnel for the many welfare agencies in the city and state. It was determined that, individually, none of the institutions could afford to implement such a program; however, each of the institutions had components required for the program. By pooling these resources, it was found that no new faculty would be needed for the support courses and that only specialized faculty would be required. The program began in 1968 with 1½ FTE faculty. At that time, students cross-registered through channels set up for the New Orleans Consortium (also established in 1968), but the Social Welfare Program was not a part of the Consortium per se. Social welfare operated from institutional departmental bases, sociology at Loyola and Xavier and psychology at Dominican. In 1971, because of problems in budget control relating to grants supporting the program, Social Welfare became a Consortium project.

Because of benefits for students (accessibility) to graduate schools and higher starting salaries, particularly in agencies), efforts began in 1976 to have the program accredited by the Council on Social Work Education (CSWE). A self-study was conducted and a site visit held, but accreditation was not granted. The Council made specific recommendations and pointed to the difficulties of fulfilling the recommendations in a Consortium setting. However, because of the high priority placed on accreditation by program leaders, all institutional representatives, students, and Consortium staff joined in a concerted effort to meet accreditation standards.

A second self-study was conducted in 1977-78, a site visit was held in the Fall of 1978, and accreditation granted in December, 1978.

3.2 Relation to Institutional Objectives:

All three institutions have objectives which relate to academic training in the human service area. This program meets those objectives.

3.3 Could this program be offered if the Consortium did not exist?

The program was begun cooperatively because the costs of implementation were too great for the institutions individually; all three institutions have recently verified that they have no interest in operating this Major individually.

D. PROGRAM USE

4.1 Program Enrollment:

Enrollment in the program grew rapidly (to 116 Majors in 1974). Majors in 1977-78 numbered 92. The decline was due to several factors: The slowness of receiving accreditation; a more rigid curriculum (more required courses, fewer electives) required for accreditation; a drop in the job market nationally. However, the students have had no difficulty in finding jobs in Louisiana and freshmen again are expressing a strong interest in Social Work. It is expected that the number of majors will level off near 100.

4.2 Enrollment Capacity:

The present structure of the program could accommodate approximately 130 Majors without additional faculty. If that number of Majors enrolled, however, faculty could no longer teach service courses for the institution.

E. PERSONNEL

5.1 Faculty:

The faculty are located on each campus, in proportion to the number of students on that campus. There are five full-time faculty members: two at Loyola, two at Xavier, and one at Dominican. A chairperson (from the faculty) is nominated by the faculty, with approval by the Consortium Deans' Committee. Final approval is by the Consortium Executive Committee. The term is for three years with a two-term limit. The chairperson not only serves the Social Work Department itself, but also represents the department in chairpersons' groups at each of the institutions. Faculty may be in a tenure track at an institution, or appointed on one year contracts. Two faculty are tenured, two are in a tenure track, and one position is to be filled with a one year contract.

5.2 Staff:

The Executive Director, the Consortium and the Academic Projects Director assist with major proposals and similar work for the program.

5.3 Classified Staff:

The program is served by three part-time secretaries, one on each campus. The secretary in the central office also assists the program when major proposals or similar large volumes of work are in process.

F. MEASURES OF PROGRAM STRENGTH

6.1 Accreditation:

Accredited in December 1978, by the Council on Social Work Education.

6.2 Certification:

Not applicable.

6.3 Recognition by National Societies:

Not applicable.

6.4 Other Measures of Program Strength:

a. The success of department graduates in graduate school;

b. The success graduates have in receiving good job placement;

c. The large number of agencies in New Orleans which request students for field placement;

d. The strong letters of recommendation written for students after a field placement has been completed;

e. The active participation of the Advisory Council (representatives of agencies, state and local government, etc.) in evaluation/planning for the department.

G. FINANCIAL

Total Direct Costs

	1976-77	1977-78	1978-79
Total Faculty Salaries	$61,382	$67,450	$69,025
Departmental Budget	2,800	4,452	4,072
Total of grants covering budget costs	33,982	29,648	42,984
Grant for student stipends	16,140	18,000	-0-

Cost Breakdown by Institutions**

At Loyola: the direct costs for faculty and departmental support for 1977-78 were $25,900; $10,000 toward one faculty salary was covered in a grant. There were 24 majors who paid a total of $54,000 in tuition. Therefore, $28,100 was collected from majors (who probably would not have been at Loyola had it not had a major in Social Work) in excess of direct costs. When $10,000 (from grant) is deducted from the cost to the institution, $38,100 was produced.

At Xavier: total direct costs were $29,500; $10,000 toward one faculty salary was covered by a grant. There were 48 majors who paid a total of $81,600 in tuition. Therefore, $52,100 was collected from majors (who probably would not have been at Xavier had it not had a major in Social Work) in excess of direct costs. When $10,000 (from grant) is deducted from the cost to the institution, $62,100 was produced.

At Dominican: total direct costs were $10,000; $8,000 toward one faculty salary was paid from a grant. There were 8 majors who paid a total of $12,000 in tuition. Therefore, $2,000 was collected from majors (who probably would not have been at Dominican had it not had a major in Social Work) in excess of direct costs. When $8,000 (from grant) is deducted from the cost to the institution, $10,000 was produced.

Grant funds for each of the years also paid for consultant assistance, some travel, supplies, etc. For that reason, the direct costs to the department were not as great. It should be noted that since its inception, the program has attracted $495,620 in grant funds, all directly applicable to program costs or to student stipends.

Statistics for the study came from a variety of sources: departmental budgets, annual reports, grant award documents, institutional catalogues, and interviews with faculty, deans, finance officers, and the Consortium staff.

The faculty/student ratio in the program is lower for the years cited than it would normally be, since teaching loads were reduced while the accreditation self-study was being prepared. While the number of majors remains at the present level, some faculty will teach service courses in related areas. Faculty who are in charge of field placements, however, will normally have a smaller faculty/student ratio because of the time demands of that position. Even with these factors considered, the program is cost effective.

The real evaluations of cost effectiveness, however, are clear when an assessment is made of what the costs would be if each institution were to have its own Major in Social Work. In order to teach the courses required to maintain accreditation, each institution would have to employ four FTE faculty, making those costs two or three times greater. Each of the institutions would be competing for the same student market; therefore, there could be no hope of much increase in enrollment. Three institutions in one city certainly would not each receive grants from the same agencies.

In addition to these direct financial factors, the institutions feel they have been able to attract a stronger faculty as a result of working together and that unified recruiting for the program is much more effective.

**The site visit for this program was made in 1977-78; therefore, examples are from that year. 1978-79 data were collected by correspondence.

A. PROGRAM IDENTIFICATION - Tri-College University

1.1 Title of Program: Tri-College University Educational Administration Programs (Masters of Science and Educational Specialist Degrees).

1.2 Administrator: The Educational Administration degree program is administered by Tri-College University, (TCU), with a full-time program chairman who is responsible directly to the Tri-College University Provost.

1.3 Participants:

North Dakota State University
Moorhead State University
Concordia College

B. PROGRAM OBJECTIVES

2.1 Objectives:

The basic objective of the program is to prepare elementary and secondary school educators to assume leadership roles as principals and superintendents.

2.2 Descriptive Information:

The masters degree and sixth-year educational specialist degree in Educational Administration are the only degree programs operated by Tri-College University, although there are numerous other sorts of academic program cooperation among the member institutions. The program is designed to prepare students to meet the Minnesota or North Dakota certification requirements for elementary or secondary school principals and superintendents. The program utilizes competency-based instructional methods and emphasizes field-based practicum experiences for all students.

C. CONTEXT

3.1 Brief History of the Program:

The Tri-College Educational Administration Program was implemented in 1976, following approval at all appropriate levels in both North Dakota and Minnesota. The program was reviewed in 1977 by a team from the North Central Association of Colleges and Schools, and TCU was granted candidate for accreditation status in April, 1977. Full accreditation was granted in 1979, making Tri-College University the first consortium to receive such accreditation for a cooperative degree program.

3.2 Relation to Institutional Objectives:

The program stands in a positive relationship to the objectives of the participating institutions and of the consortium. While all of the member institutions of TCU participate in the Educational Administration Program, the extent of their participation differs according to the campus mission and the level of graduate offerings authorized at the respective institutions. That is, North Dakota State University (NDSU), authorized to offer graduate programs, including the educational specialist level, and Moorhead State University (MSU), authorized to offer graduate programs at the masters level, participate more extensively in the TCU program. Concordia College, which does not offer graduate programs within its institutional mission, participates in the program to a lesser extent but does provide support and adjunct faculty.

3.3 Could this program be offered if the Consortium did not exist?

The history of attempts to establish the educational specialist degree in educational administration indicates that success was impossible without the cooperative model.

Although both NDSU and MSU had offered the masters degree for some time, it was not unusual for particular course offerings to cancel for lack of enrollment. Requirements of state certifying agencies led to the declining utility of the masters degree in Minnesota. NDSU first requested authorization for the Ed.S. degree in the early 1970s, but had been refused by the governing board in North Dakota. Moorhead State had even earlier requested authorization for a degree specializing in elementary education, but had not received a positive reaction.

Discussions began again in 1973. Several levels of review authority in Minnesota had approved the program, subject to endorsement by North Dakota, but the appropriate authority in that state refused a second proposal outright and delayed a third by a tie vote. It was clear then, and is acknowledged now, that the political scene, especially in North Dakota, favored the TCU model rather than any other. Institutional faculty and administrators point out that without the cooperative model, the program would not exist at all.

D. PROGRAM USE

4.1 Program Enrollment:

Reliable enrollment data are available for the first two years of the program. In 1976-77, the program enrolled 150 students (headcount) or 120 FTE (at 9 credits per full-time student). During the second year, 1977-78, headcount enrollment was 175, giving an FTE enrollment of 145.

E. PERSONNEL

5.1 Faculty:

In 1976-77, Moorhead State provided 1.5 FTE faculty for the program and North Dakota State provided 2.0 FTE. Concordia College is not authorized to offer graduate level programs, but provides 2 adjunct faculty. In 1977-78, MSU increased its faculty contribution to 1.75 FTE, while other factors remained unchanged.

5.2 Academic Staff:

All three participating institutions provide academic staff services (deans, administrators, etc.), although these services are performed by personnel who do not have this program as a primary element of their assignments. A more detailed display of these services can be had by consulting the cost data provided later in this report.

5.3 Classified Staff:

Cost data provided later in this report indicate the extent of the support and clerical staff available to the program.

F. MEASURES OF PROGRAM STRENGTH

6.1 Accreditation Status:

Full accreditation for the program was granted in 1979 by the North Central Association of Colleges and Schools.

6.2 Certification:

The programs meet the certification requirements of both Minnesota and North Dakota for elementary and secondary school principals and superintendents.

G. FINANCIAL

7.1 Total Program Costs:

Reliable data are available for 1977-78 only (see next page):

Contributed Costs

Education Administration faculty salaries	$ 52,842	(MSU)	
	50,973	(NDSU)	
			$103,815
Other academic salaries (graduate dean, etc.)	$ 2,443	(MSU)	
	3,685	(NDSU)	
	1,242	(CC)	
			$ 7,370
Office space	$ 4,200	(MSU)	$ 4,200

Direct Costs

Income

MSU Contribution	$ 6,575
NDSU Contribution	6,575
	$13,150

Expense

Work Study, Student Help	$ 3,000	
Postage	300	
Telephone	250	
Educational Supplies	1,205	
Office Supplies	1,895	
Equipment	400	
Travel (in-state)	2,600	
Dues, meetings	500	
Secretary	3,000	
		$ 13,150

Total Costs		$128,535
Concordia	$ 1,242	
MSU	66,060	
NDSU	61,233	

H. SUMMARY ANALYSIS

The information and data collected for this case study were supplied by program faculty, participating institution administrators, and the TCU Provost. In determining the benefit gained through use of the cooperative program, the study team requested estimates of the costs which would be experienced if the two institutions were authorized to offer graduate level programs. The following data were supplied by the consortium office:

Faculty		
MSU, 3.0	$83,052	
NDSU, 3.0	83,052	
Other (graduate dean, etc.)		
MSU	2,443	
NDSU	3,685	
Work Study, student help		
MSU	500	
NDSU	500	
Postage		
MSU	300	
NDSU	300	
Telephone		
MSU	100	
NDSU	100	
Educational Supplies		
MSU	1,000	
NDSU	1,000	
Office Supplies		
MSU	1,500	
NDSU	1,500	
Equipment		
MSU	400	
NDSU	400	
Travel		
MSU	2,080	
NDSU	2,080	
Dues, Meetings		
MSU	500	
NDSU	500	
Secretary		
MSU	3,000	
NDSU	3,000	
Total MSU		$ 94,875
Total NSDU		96,117
		$190,992

As will be noted here, the total estimates for the two independent programs exceed the 1977-78 cost of the cooperative program by $62,457.

A. PROGRAM IDENTIFICATION - Quad-Cities Graduate Study Center

1.1 Title of Program: Quad-Cities Graduate Study Center

1.2 Administrator: Dr. Donald A. Johnson, Director

1.3 Participants: (primary departments in parentheses)

Augustana College (Education, Engineering)
Iowa State University (Engineering, Public Administration)
Marycrest College (Education, English)
Northern Illinois University (Education)
University of Illinois (Engineering)
University of Iowa (Business Administration, Education, Engineering, Physical Education, Social Work)
Western Illinois University (Education, English, Physical Education)
University of Northern Iowa (Education)
Southern Illinois University
Sangamon State University

1.4 Enrollment: see section 4.1 below

B. PROGRAM OBJECTIVES

2.1 Objectives:

The four purposes of the Quad-Cities Graduate Study Center are stated in the Center's Articles of Incorporation:

a. To develop in the Quad-Cities coordinated programs of study at the graduate level which are applicable toward degrees from member academic institutions;

b. To expand continuing education opportunities for individuals who desire to extend their education without qualifying for an advanced degree;

c. To consider the feasibility and the means of establishing residence degree programs;

d. To encourage experimentation in the pooling of resources of the member institutions to achieve the objectives stated above.

2.2 Descriptive Information:

The Quad-Cities Graduate Study Center, a ten-member consortium, includes both public and private institutions of higher education in a bistate metropolitan area of Iowa and Illinois encompassing almost 500,000 people. The major responsibility of the Center is to assess the need for and coordinate the delivery of curricula leading to the master's degree.

There are six Illinois colleges and universities belonging to the consortium and four Iowa Institutions. Through the Center, students may receive master's degrees in nine areas: Business Administration, Criminal Justice, Education, Engineering, English, Social Work, Physical Education, Public Administration, and Regional Studies. In addition, the Center, with the cooperation of the institutions, provides non-degree-oriented courses in art, music, history, psychology, and sociology. It facilitates the offering of a number of non-credit programs as well.

C. CONTEXT

3.1 Brief History of the Program:

The Quad-Cities Graduate Study Center was incorporated in 1969 in response to pressures from local business and industry representatives, who urged the higher education boards in Iowa and Illinois to provide some means of delivering organized graduate programs to the nearly half a million people living in the Quad-Cities area. The model chosen by the boards was that of a voluntary educational consortium. Initially there were nine member institutions offering three degree sequences.

Currently students may receive master's degrees in nine areas (see section 2.2 above).

3.2 Relation to Institutional Objectives:

Not applicable (the program objectives described above in section 2.1 constitute the consortium's objectives.)

3.3 Could this program be offered if the Consortium did not exist?

Some of the member institutions would surely provide some of the courses presently offered, but it seems clear that the range of courses and degrees, and the number of institutions participating in these courses and degrees, would be greatly constricted if the consortium did not exist.

D. PROGRAM USE

4.1 Program Enrollment

Institution	1977-78 Registrations	1977-78 FTE Students (for credit)
Augustana College	105	14
Iowa State University	93	12
Marycrest College	318	42
Northern Illinois University	100	13
University of Iowa	963	128

Institution (continued)	1977-78 Registrations	1977-78 FTE Students (for credit)
Western Illinois University	2,455	327
University of Northern Iowa	24	3
University of Illinois	10	1
	4,068	542

4.2 Enrollment Capacity:

Current programs could absorb a significant increase in enrollment without greatly increased costs (a 25% increase in registrations would not be a problem). However, if new degree programs or increases in the number of credit-free programs were put into effect, cost would increase proportionately.

4.3 Statistical Data:

	1975-76	1976-77	1977-78
Credit Enrollment	5,377	4,773	4,068
Credit-free Enrollment	275	147	587
Total Enrollment	5,652	4,920	4,655

The steady and significant decline in credit registrations over the past three years is due to a two-year drop of 1,725 registrations in credit courses in education. When the education programs are taken out, it becomes clear that the remaining programs have grown.

E. PERSONNEL

5.1 Faculty:

The names and number of participating faculty fluctuate from term to term.

5.2 Academic Staff:

Two

5.3 Classified Staff:

Three

F. MEASURES OF PROGRAM STRENGTH

6.1 Accreditation Status:

Because the member institutions of the consortium are the ones offering the degrees, this question is not applicable.

6.2 Certification:

Not applicable

6.3 Recognition by National Societies:

Not applicable

6.4 Other Measures of Program Strength:

Both outside consulting and internal program review panels have evaluated the consortium and its activities. Brief summaries of these evaluations and studies are contained in the annual reports appended to this document (those for 1977 and 1978).

G. FINANCIAL

See attachment A, Financial Statement for 1977-78.

H. LIST OF ADVANTAGES AND DISADVANTAGES RESULTING FROM THIS PROGRAM/ SERVICE:

8.1 Students:

a. The Quad-Cities Graduate Study Center provides students with an educational opportunity which they would otherwise be denied. The principal explanation for this statement is the fact that the consortium's students are older (average age: 32) and more "place-bound" than most graduate students (96% are working full-time jobs while they are taking graduate work). These, then, are not students who would find it easy to attend one of the institutions using more traditional methods, the closest of which is nearly a hundred miles away from the Quad-Cities area.

b. For all the Center's students (those who would take courses at neighboring institutions and those who would not), it is clear that there is an enormous advantage in saving of time and money to be able to remain in the Quad-Cities area for graduate course work. Savings include travel costs, meals, and other relocation expenses (for financial savings) and time and inconvenience of traveling to neighboring institutions. The consortium Director reports that, based on work done in a Human Resources Management course in the MBA program, these savings are quantifiable (as estimates):

Travel costs saved by consortium students through enrolling at the Graduate Study Center instead of having to commute to the closest graduate institution	$1,422,716*
Driving time saved	167,378 hours or 84 full employee work years*

Gallons of gas saved	697,410 gallons*

*all figures based on 1976-77 enrollment statistics.

c. There is evidence that students have a better program when the degree course sequence is planned by more than one institution. There is a natural tendency for a given institution to want and be able to offer those courses at which it has the greatest expertise, deferring to another institution in areas where the other institution is strong. This would not be the case if a single institution came in and offered the entire degree sequence.

d. The fact that there is a central office, phone number, and registration system for students enrolling for nine different graduate degree programs (and many other non-degree courses) from ten different institutions is an enormous simplification and advantage for the "consumer", the graduate student.

8.2a Institutions (Faculty and Staff):

a. It is a disadvantage to faculty to have to travel to the Quad-Cities area to teach their classes.

b. Since the bulk of the courses in the Graduate Study Center are taught by faculty who are regular, full-time faculty at one of the ten member institutions, it seems clear that the Quad-Cities Center has generated student credit hours which have been translated, more or less directly, into faculty positions which would not otherwise have existed. This is an advantage likely to assume even more significance in the next decade as college enrollments will plummet.

8.2b Institutions:

a. It is cheaper for institutions to provide graduate programs through a resident center like the Quad-Cities consortium because facilities such as residence halls, health centers, student unions, financial aid offices, etc., are usually not provided (due, in part, to the fact that 96% of the Center's students have regular full-time jobs and homes in the immediate area).

b. It is cheaper for institutions to share in the costs of publicity, advertising, scheduling, counseling, and providing general information than it would be for them to perform those functions individually.

8.3 Funding Sources:

The chief advantage of the Quad-Cities Graduate Study Center is that it provides education without the bricks and mortar costs which would normally be required to enable 500-700 FTE graduate students to pursue annually nine different degree programs. This is the main factor in the substantially lower cost of instruction at the Graduate Center compared to instructional costs at other graduate institutions in the two states. Recent research by the Iowa Board of Regents and the Illinois Board of Higher Education estimated the cost for educating a full-time graduate student in a master's program to be $4,000 per academic year. Based upon this estimate, it would have cost the two states $2,484,000 in 1977-78 to educate the Center's 621 FTE graduate credit and non-credit students if the students had attended a traditional institution.

The Graduate Center office reports that tuition income from its programs covers between 50% and 150% of the real instructional costs involved in staffing the courses (varying, of course, with enrollment and faculty salary costs). In calculating the dollar savings involved, the Graduate Center office has chosen the most conservative figure (assuming that tuition covers only 50% of instructional costs). Actual tuition income in 1977-78 was $494,000, so the office arrives at a real instructional cost figure of $988,000 by this method. To this sum must be added the operational costs of the Center itself: $166,000. The total figure, then, for cost of the Center and its courses is $1,154,000.

This sum is $1,330,000 less than the cost would have been if the Center's students had enrolled in a traditional institution at the average cost to that institution of $4,000 per year. Another way of expressing the same fact is that Iowa and Illinois each saved $665,000 by encouraging (and funding) graduate instruction through the Quad-Cities Graduate Study Center.

Costing higher education, as both the American Council of Education and the Tom James studies have documented, is difficult and imprecise. It is worth pointing out that the savings calculated above have withstood perhaps the ultimate scrutiny: they have been reported to and accepted by the legislatures of Iowa and Illinois, the bodies with responsibility for deciding to fund the Center's operations.

8.4 Community:

No report on the Quad-Cities Graduate Study Center would be complete without mention of the advantage it constitutes to the Quad-Cities community. The Center was formed originally through community efforts, both political and financial ($200,000 was raised locally to support the Center's early years of operation). Advantages to individuals in the community have been mentioned in section 8.1, but it is worth pointing out that employers, schools, and government agencies are likewise beneficiaries of the education provided by the Center. The entire history of the Center attests to the warmth with which it has always been welcomed.

Attachment A

DOYLE & KEENAN

Certified Public Accountants
1101 Davenport Bank Building
Davenport, Iowa 52801
(319) 323-1864

Board of Directors
Quad-Cities Graduate Study Center
Rock Island, Illinois

We have examined the statement of assets and liabilities arising from cash transactions of the Regular Fund and the Special Fund of the Quad-Cities Graduate Study Center as of June 30, 1978, and the related statement of revenues collected and expenses paid for the year then ended. Our examinations were made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

As described in the notes to the financial statements, the Organization's policy is to prepare its financial statements on the basis of cash receipts and disbursements; consequently, certain revenue and the related assets are recognized when received rather than when earned, and certain expenses are recognized when paid rather than when the obligation is incurred. Accordingly, the accompanying financial statements are not intended to present financial position and results of operations in conformity with generally accepted accounting principles.

In our opinion, the financial statements referred to above present fairly the assets and liabilities arising from cash transactions of the Regular Fund and the Special Fund of the Quad-Cities Graduate Study Center as of June 30, 1978, and the revenues collected and expenses paid during the year then ended, on the basis of accounting described in the notes to financial statements which have been applied on a basis consistent with the preceding year.

Doyle & Keenan
Certified Public Accountants

Davenport, Iowa
July 22, 1978

Exhibit "A"

QUAD-CITIES GRADUATE STUDY CENTER
Statement of Assets and Liabilities
Arising from Cash Transactions
June 30, 1978

Regular Fund

Assets - Cash in Checking Account - The Rock Island Bank and Trust Company	$ -
Fund Balance:	
Balance - July 1, 1977	$ -
Excess of Revenues Collected over Expenses Paid - Exhibit "C"	-
Balance - June 30, 1978	$ -

Special Fund

Exhibit "B"

Assets:	
Cash in Checking Account - The Rock Island Bank and Trust Company	$ 2,660.24
Savings Accounts:	
The Rock Island Bank and Trust Company - 5.0%	21,617.54
American Bank of Rock Island - 6.0%	20,957.90
U.S. Treasury Note under Repurchase Agreement with the American Bank of Rock Island - 6.0%	20,000.00
Total Assets	$ 65,235.68
Fund Balance:	
Balance - July 1, 1977	$ 44,571.03
Excess of Revenues Collected over Expenses Paid - Exhibit "D"	20,664.65
Balance - June 30, 1978	$ 65,235.68

The notes to financial statements are an integral part of this statement.

Exhibit "C"

QUAD-CITIES GRADUATE STUDY CENTER
Statement of Revenues Collected and Expenses Paid
Regular Fund
For the Year Ended June 30, 1978

	Actual	Budget	Over (Under) Budget
Revenues Collected:			
Grant from State of Illinois	$ 82,000.00	$ 82,000.00	$ -
Grant from State of Iowa	82,000.00	82,000.00	-
Contribution from Quad-Cities Graduate Study Center - Special Account	2,000.00	2,000.00	-
Total Revenues Collected	$ 166,000.00	$ 166,000.00	$ -
Expenses Paid:			
Personnel	$ 92,747.56	$ 92,000.00	$ 747.56
Contractual	35,360.09	35,000.00	360.09
Travel	1,768.69	2,000.00	(231.31)
Instructional Services and Supplies	12,093.66	13,000.00	(906.34)
Capital Equipment	555.50	600.00	(44.50)
Printing and Promotion	15,151.24	14,400.00	751.24
Telephone	2,920.02	3,000.00	(79.98)
Administrative Expense	3,403.24	4,000.00	(596.76)
Contingency	2,000.00	2,000.00	-
Total Expenses Paid	$ 166,000.00	$ 166,000.00	$ -
Excess of Revenues Collected over Expenses Paid	$ -	$ -	$ -

The notes to financial statements are an integral part of this statement.

Exhibit "D"

QUAD-CITIES GRADUATE STUDY CENTER
Statement of Revenues Collected and Expenses Paid
Special Fund
For the Year Ended June 30, 1978

Revenues Collected:		
Tuition from Contract Courses:		
University of Iowa	$ 56,588.00	
Quest for Quality	11,280.00	
Western Illinois	7,950.00	
Iowa State	5,427.86	
Northern Illinois	2,110.00	
Augustana	692.00	
Total Tuition from Contract Courses		$ 84,047.86
Interest Income		5,118.72
Sale of Identification Cards		1,130.00
Total Revenues Collected		$ 90,296.58
Expenses Paid:		
Cost of Contract Courses:		
University of Iowa	$ 44,920.00	
Quest for Quality	7,788.69	
Western Illinois	9,317.00	
Iowa State	3,097.94	
Northern Illinois	1,670.38	
Augustana	829.75	
Total Cost of Contract Courses		$ 67,623.76
Contribution to Quad-Cities Graduate Study Center - Regular Fund		2,000.00
Miscellaneous		8.17
Total Expenses Paid		$ 69,631.93
Excess of Revenues Collected over Expenses Paid		$ 20,664.65

The notes to financial statements are an integral part of this statement.

Notes to Financial Statements

Note 1

The Quad-Cities Graduate Study Center maintains its records on a cash basis of accounting. The Center records the purchase of equipment as an expense in the year cash is disbursed. No depreciation is provided for in the statements. Receivables, payables, inventories, prepaid expenses, and accruals are not taken into consideration and consequently the accompanying financial statements are not intended to present financial position and results of operation in conformity with the generally accepted accounting principles.

Note 2

For the fiscal year covered by this report, the Graduate Center's operation is partially funded by a $82,000 grant from the State of Illinois and a $82,000 grant from the University of Iowa. The Graduate Center is to provide $2,000 from other sources to complete funding for the $166,000 budget of the Regular Fund. The Graduate Center's portion comes from a contribution from its Special Fund. (See Note 4).

As one of the conditions of the University of Iowa grant, the Graduate Center must refund a percentage of the undistributed budgeted funds of the Regular Fund for the fiscal year ended June 30, 1978. This fund spent exactly its budget for the period and no refund is due.

Note 3

Tuition payments are usually made by the student directly to the university sponsoring the course. The tuition from these courses is not included in the receipts. However, certain courses are sponsored by the Graduate Center and this tuition is included under "Tuition fromContract Courses" in the Special Fund. The universities involved would not offer these contract courses, due to the financial risk, unless these specific courses were handled in this manner. The Graduate Center pays the schools a standard fee and then either makes or loses money on the course depending on the enrollment.

Note 4

The Special Fund of the Graduate Center is used to handle funds in connection with the contract courses discussed in Note 3, contributions, interest income on investments, and miscellaneous transactions which do not relate to the regular activities of the Graduate Center. The $2,000 contribution to the Regular Fund represents the Graduate Center's share of funding of the regular program of the Center.

A. PROGRAM IDENTIFICATION - Five Colleges, Inc.

1.1 Title of Program: Five Colleges Astronomy Department

1.3 Participants:

Amherst College
Hampshire College
Mount Holyoke College
Smith College
University of Massachusetts at Amherst

1.4 Enrollment:

See section 4.1

B. PROGRAM OBJECTIVES

2.1 Objectives:

By pooling resources in faculty, library, and facilities, the objectives are to offer superior instruction in astronomy, improve equipment and library holdings, and afford time and facilities for faculty research.

2.2 Descriptive Information:

Faculty are appointed to afford the complementarity needed to offer desired undergraduate and graduate curriculum and to produce valuable research. A chairperson is elected by the faculty.

Minor equipment needs are dealt with by each institution; major equipment is handled jointly.

C. CONTEXT

3.1 Brief History of the Program:

At the turn of the century, all three of the private colleges had or built modern observatories, and for several decades Astronomy held an equal place among the sciences. But by mid-century, the colleges were not able to keep pace with new developments at the major observatories. Enrollments were low and equipment inadequate for modern research, except, perhaps, at Amherst. It was difficult to recruit excellent faculty or acquire new equipment. One (or two) faculty members handled all courses in the field at each institution, forcing faculty to teach outside their specialities and leaving little or no time for research.

The joint department was suggested in 1959 as an outgrowth of the student exchange taking place among the individual colleges, from the expressed concern that modern astronomy equipment was too expensive for the small private colleges alone and that without such equipment, good research faculty could not be attracted.

At that time, the Consortium consisted of only four colleges, since Hampshire had not yet come into existence. In 1959, four astronomers (one at Mt. Holyoke, one at the University, and two at Amherst) had to devote their time almost exclusively to teaching. There was much duplication of effort and no time for research. The suggestion for the joint program came from the combined faculties.

Growth in numbers at the University in 1966, plus the addition of a graduate program, greatly influenced current structure and operation of the department. (The University grew from approximately 5,000 students in 1960 to over 18,000 in 1970). There are now 5 FTE (six astronomers) on the faculty at the private colleges and 13.5 FTE at the University.

Student enrollment in elementary courses has grown from 219 in 1958 to 2,574 in 1978; enrollment in advanced courses has grown from 20 to 149 during the same time (see Table I).

3.2 Relation to Institutional Objectives:

All documents concerning the program refer to the desire of the colleges to maintain academic superiority and to provide outstanding research capability. The formation of the department furthered the ability of the institutions to continue to provide both.

3.3 Could this program be offered if the Consortium did not exist?

If it were not for the fact that the Consortium offered this program, the expense would be too great for the private colleges alone. Although the University could afford the program, officials there emphasize the values of cooperation with the private colleges.

The attitudes of respect and cooperation which exist generally at the University and at the private colleges form the basis of a fine model for cooperation between public and private institutions.

D. PROGRAM USE

4.1 Table I illustrates enrollment growth from 1965 to 1978.

Current approximate total undergraduate enrollments of the member institutions are: University of Massachusetts, 18,000; Amherst, 1,400; Mount Holyoke, 1,900; Smith, 2,500; Hampshire, 1,300. One could assume that the University, with its large enrollment and extensive faculty, might have much larger utilization of the program than the private colleges; Table II, however, illustrates wide and relatively equal usage between the university and the private colleges.

4.2 Enrollment Capacity:

Does the program have the capacity to absorb increased enrollment without significant added costs? Some increase is possible.

4.3 Statistical Data:

Give data which show volume and patterns of use for 3 years. See 4.1.

E. PERSONNEL

5.1 Faculty:

19.5 FTE (2.5 FTE supported by grants.)

F. MEASURE OF PROGRAM STRENGTH

6.1 Accreditation Status:

No special accrediting body; program comes under New England Association of Schools and Colleges.

6.2 Certification:

Not applicable.

6.3 Recognition by National Societies:

Most faculty and some students belong to Sigma Psi (national science fraternity); most faculty belong to New England Radio Observatory Council and American Astronomical Society.

6.4 Other Measures of Program/Service Strength:

Since one of the objectives of the program is research, attention must be given to the department and to the various members of the department for research.

One of the assumptions used in the founding of the department was that bringing the various astronomy faculties together in a single unit would produce a more catalytic and supportive climate for research. That assumption has certainly proved to be valid.

A partial list of grants for research is given in Table VI. Both the amounts and the regularity of funding attest to tremendous activity. Publications resulting from these research projects attest to their validity and are on file at the Five Colleges institutions.

G. DATA & ANALYSIS

The following tables display data used in making the analysis:

Table I shows detailed enrollment spreads from 1975 through 1978, including the numbers of majors; Table II shows Undergraduate enrollments from each college for three years, plus figures for total students taking astronomy courses; Table III is a Budget Summary for three years; Table IV is a detailed budget for

1978-79; Table V shows tuition costs for each institution for 1978-79; Table VI shows some of the grants attracted to the program for equipment and research.

Since one of the goals of the program was to attract research funds (in order to assist in accomplishing valuable research), Table VI is highly significant. Little grant money has ever been used in supplying operational costs; such costs have been paid by the institutions.

Confidential information to which the site visitors had access at one of the colleges showed that, because of the cooperative nature of astronomy, the cost per course for astronomy was the lowest in the science division and less than half the cost of the next highest costing discipline. The third lowest costing discipline was three times more expensive and the highest costing discipline was seven time higher than the Astronomy department.

Tuition is depended on for only a small portion of program costs at Amherst, Mt. Holyoke, and Smith; endowments at these institutions provide most of the budget. At U Mass/Amherst, state support pays for most of the costs. Hampshire College has the highest tuition because it is a new institution with a small endowment. Therefore, little can be learned from comparing program costs with income from tuition. However, it is important to remember that these colleges were, and are now, concerned about the program's producing income. They began the department cooperatively to be capable of maintaining quality in curriculum and producing valuable research. They felt the department would attract substantial grant funds and this has proved to be true. They realized that costs maintaining astronomy in the face of rapidly advancing technology would be prohibitive alone; they felt they could accomplish their goals collectively and keep costs within a reasonable range.

Data supporting all tables are on file in the CIL office and at Five Colleges, Inc. The data were gathered at Five Colleges by the Five College staff from the departmental records of each member institution.

Table I

ENROLLMENTS*

	Undergrad. Astronomy Majors	B.A./B.S. Degrees Granted	Enrollment Elem.Astron. Courses		Undergrad. Enrollment Advanced Courses		Graduate Students Enrolled	M.S. Degrees Rec'd	Ph.D. Rec'd
			1st. Sem.	2nd. Sem.	1st. Sem.	2nd. Sem.			
Four College Observatory									
1965 - 1966	22								
1967 - 1968	37	3	694	523	30	26	5		
1968 - 1969	33	6	764	617	38	72	10	3	
1969 - 1970	26	6	524	1,154	69	47	3	4	
Five College Astron.Dept.									
1970 - 1971	32	5	903	507	65	79	19	6	
1971 - 1972	43	5	826	757	52	78	24	7	
1971 - 1973	32	10	983	978	61	43	26	1	
1973 - 1974	28	4	1,223	1,241	48	67	29	1	
1974 - 1975	51	10	1,383	1,324	70	83	27	3	3
1975 - 1976	40	9	1,252	1,458	55	75	24		3
1976 - 1977	55	11	998	1,059	67	97	26		2
1977 - 1978	32	4	1,106	1,468	68	81	24		2

* Figures through 1975-76 were complied from informal departmental records; figures for 1976-78 were compiled from official registration figures.

Table II

UNDERGRADUATE ASTRONOMY ENROLLMENTS*

Total students in:	1976-77	1977-78	1978-79
Elementary courses	2,057	2,574	2,553
Advanced courses	164	149	162
Total	2,221	2,723	2,715

Advanced Enrollments

By Institutions:

Amherst College	44	43	21
Hampshire College	14	9	4
Mount Holyoke	15	11	14
Smith College	29	15	40
University of Massachusetts	62	71	83

* Figures were compiled from data supplied by The Registrars.

Table III

Summary: Budgets (3 Years)

	1976-77	1977-78	1978-79
Office Expense	$ 28,100	$ 29,575	$ 31,150
Faculty salaries	262,265	281,158	306,747
TOTALS	$290,754	$310,733	$337,897

Table IV

Five College Astronomy Department
Budget Summary 1978-1979

	Budget 1977-78	Budget 1978-79	Amherst	Hampshire	Mt. Holyoke	Smith	University
Office Expenses	29,575	31,150	5,910	5,910	5,910	5,910	7,510
Special Request*		5,265	1,053	1,053	1,053	1,053	1,053
Faculty Salaries - Local Cost[1]	239,748	262,127	11,406	11,298	11,875	13,852	213,696
Faculty Salaries - Five College[2]	41,410	44,620	8,924	8,924	8,924	8,924	8,924
Astronomy Total	310,733	343,162	27,293	27,185	27,762	29.739	231,183

1. And 2 Do Not Include Fringe Benefits

*Matching funds for Microdensitometer.

Table V

Tuition Costs (no student activity fees, etc.) 1978-79

Amherst College	$5,150
Hamphire College	$5,625
Mt. Holyoke College	$4,550
Smith College	$5,100
U Mass/Amherst	
In-state, undergraduate	$ 625
In-state, graduate	$ 800
Out of state, undergraduate	$2,150

371

Table VI (A)

GRANT SUPPORT SINCE 1970 (GENERAL)

NSF, "College Science Improvement Program", Section B
"to implement a locally based teaching and research program in radio astronomy, principally through the construction of a new Five College Radio Astronomy Observatory"

5/28/70 - 8/31/72
$75,900

Max C. Fleishmann Foundation, "Proposal for the Construction of a Five College Radio Observatory"

1970-71
$53,000

Alfred P. Sloan Foundation, "Proposal for the Construction of a Five College Radio Observatory"

1970-71
$20,000

Helen M. Land-E.H. Land Foundation

1970
$1,500

Research Corporation

G. Richard Huguenin and Joseph H. Taylor for pulsar research (included building of antenna)

around 1970
$73,000

NSF, "Instructional Scientific Equipment Program"

1972-74
$20,000

NSF, "Instructional Scientific Equipment Program", "Facilities Improvement for Instruction and Student Research in Astronomical Spectroscopy"

1/8/78 - 1/31/81
$5,200

Table VI (B)

CURRENT RESEARCH GRANT SUPPORT IN ASTRONOMY

Prin. Inves.	Co-Inves.	Agency	Amount	Dates
T. R. Dennis		Research Corp.	$ 10,000	1/1/77 - 12/31/78
W. A. Dent		NSF	28,670 28,670	4/15/78 - 4/14/79 4/15/79 - 4/14/80
G. R. Huguenin		Res.Fdn.,SUNY	27,715	7/1/77 - 4/30/78
G. R. Huguenin/ K. S. Yngvesson		NSF	825,000	12/1/77 - 11/30/78
R. L. Huguenin		NASA NASA	40,000 20,000	10/1/77 - 9/30/78 10/1/77 - 9/30/78
W. M. Irvine		NASA	49,950	9/1/77 - 8/31/78
W. M. Irvine	D. Van Blerkom	NSF	7,500	9/1/76 - 8/31/78
J. H. Taylor	E. Tademaru	NSF	109,800	11/1/77 - 10/31/79

Table VI (C)

CURRENT AND PENDING RESEARCH SUPPORT

G. R. Huguenin, NSF, Astronomy Research at the Five College Radio Astronomy Observatory, 12/1/79-11/30/80, $890,000 -

K. S. Yngvesson, Submitted to NASA, Galactic Survey of Intersellar Oxygen, Using Mixers and Masters at 60 GHz,

J. H. Taylor, NSF, Observations and Theoretical Investigations of Pulsars, $56,800

P. F. Goldsmith, NSF, Development of a High Sensitivity Millimeter Wave Detector System, $8,800 - equipment only

P. T. Parrish, NSF, Reactive Downconverters for Radio Astronomy at 75-140 GHz, $53,070

W. M. Irvine, NASA NGL 22-010-023, Studies of Radiative Transfer in Planetary Atmospheres, $53,428

W. A. Dent, NSF 5-23282, The Evolution of Non-Thermal Radio Sources, $28,764

A. PROGRAM IDENTIFICATION - Claremont Colleges

1.1 Title of Program: Joint Science Department

1.2 Administrator: Dr. Margaret Mathies, Chairman

1.3 Participants:

Claremont Men's College
Pitzer College
Scripps College

1.4 Enrollment:

The 1977-78 FTE enrollment at the three participating colleges was approximately 2,100 students (Claremont Men's College: 868; Pitzer: 725; Scripps: 485). In addition, cross registration permits students from any other of The Claremont Colleges to enroll in Joint Science Department courses, and thus the program is open to an additional 1,750 students (from Harvey Mudd and Pomona Colleges).

An additional kind of enrollment figure of concern to those establishing the budget for the Joint Science Department is the number of freshmen at each of the three participating institutions:

	1976-77	1977-78	1978-79
CMC	228	266	247
Pitzer	191	209	200
Scripps	180	162	171

B. PROGRAM OBJECTIVES

2.1 Objectives:

a. To offer non-science students a variety of courses that deal with the problems and challenges of science and technology;

b. To offer students majors in biology, chemistry, physics, and (in cooperation with the psychology department), psychobiology;

c. To offer a foundation of science courses which students can supplement (through cross-registration, if necessary, at other Claremont Colleges) to develop programs in such areas as astronomy, botany, geology, mathematics, human biology, environmental studies, molecular biology, biochemistry, and natural history;

d. To emphasize student-faculty relationships in both course work and in individual research projects;

e. To give students a strongly interdisciplinary academic experience.

2.2 Descriptive Information:

a. The Claremont Colleges are a unique educational arrangement of five undergraduate schools, a graduate school, and the Claremont University Center. The founding dates of each are as follows:

   1888, Pomona College
   1925, Claremont University Center and the Graduate School
   1932, Scripps College
   1946, Claremont Men's College (co-ed since 1975)
   1955, Harvey Mudd College
   1964, Pitzer College (co-ed since 1967)

   Each college has its own Board of Trustees, and there is a Board of Fellows which governs the Claremont University Center (a board which is drawn, in part, from the trustees of the individual colleges). All land is held by the Claremont University Center, and all administrative services are performed jointly. Libraries and library services are also operated jointly.

b. The Joint Science Department provides general science education and science majors for students at Claremont Men's College, Pitzer College, and Scripps College, as described in the following material appended to this report:

   Appendix B, Claremont Men's College Bulletin (pp 13-14)
   Appendix C, Pitzer College Bulletin (pp 90-94)
   Appendix D, Scripps College Bulletin (pp 103-109)

c. Faculty of the Joint Science Department are hired and employed jointly by the three participating colleges.

   New faculty are assigned to each of the three participating institutions, in turn, for two years each for purposes of advising and committee work, so that when the faculty come up for tenure, their colleagues may know them. After tenure is earned, a similar rotation of duties takes place, but at intervals of three years, rather than two. Joint Science Department faculty answer to the personnel committees of the three participating colleges plus a joint personnel committee.

d. The budget of the Joint Science Department is shared by all three participating colleges according to a formula based largely on student enrollments in the program (see Appendix A to this report).

e. The Joint Science Department is housed in its own building/laboratory complex (along with the graduate program in psychology).

C. CONTEXT

3.1 Brief History of the Program:

In 1964 the situation at the Claremont colleges was as follows: Claremont Men's College had recently added programs in chemistry and physics and was looking for an improved way of providing courses in biology for its students. Pitzer College (a new women's college at the time, with a basic concentration in the social sciences) and Scripps College were anticipating providing general undergraduate science courses for their non-science students. A Dean of Claremont Men's College proposed to the other two colleges that the three institutions consider establishing a joint science department, with lower division service courses in science as the principal thrust. (Both Pomona College and Harvey Mudd College had extensive programs in science already.) This CMC proposal was adopted, and beginning in the fall of 1964, the Joint Science Department began operation with a faculty of three. Over the years, majors became a stronger emphasis of the JSD, and the faculty has grown to thirteen full-time instructors, plus support personnel.

3.2 Relation to Institutional Objectives:

The governance structure of the Claremont Colleges provides, as a general rule, that the consortium office - the Claremont University Center - enter into the picture only when four of the member institutions (or more than four) participate in a project. Because only three of the individual colleges participate in the Joint Science Department, it is not a consortium project. As the history of the program makes clear, though, as outlined above, the Joint Science Department fulfills the general objectives shared by CMC, PC, and SC of offering majors and general education courses to the students of those institutions.

3.3 Could this program be offered if the Consortium did not exist?

The Chairman of the Joint Science Department says that none of the individual colleges could or would offer a program of the scope and magnitude of the Joint Science Department if it did not exist. It is clear that some alternative would exist in the absence of the Department, but it is difficult to say clearly what that alternative would look like, especially since it was created, in essence, ex nihilo. There are three scenarios which might be followed if the Joint Science Department (JSD) were not operative today:

a. The Cross-Registration Route: If JSD were not in existence, it is possible that CMC, Pitzer, and Scripps students could take lower division service courses at Pomona or Harvey Mudd Colleges. The difficulty with taking such courses at Harvey Mudd is that Harvey Mudd is a technical, science-strong institution, and most of the science courses it offers are not designed for the non-science student. The difficulty with taking such courses at Pomona is that Pomona would, then, in effect, be providing almost the entire general education science program for four colleges. It would not be able to do this without an increase in faculty allocations. What the program at Pomona would end up looking like is a JSD with four college members rather than three, and with one college rather than three participating in governance and curriculum planning. In summary, this cross-registration alternative is not really a viable alternative to the present system.

b. The Individual College Program Route: Another possibility if JSD did not exist, would be for CMC, Pitzer, and Scripps each to have its own science program. This would, in the case of lower division service courses for non-science students, be duplicative and more costly than the present set up - in faculty allocations and, even more the case, in facilities and building/maintenance costs. In the case of majors (which the JSD offers), it is hard to predict whether CMC, Pitzer, and Scripps would offer the current range or not. The best guess is the CMC would offer many of them, but that the other two colleges would offer few. The result, then, would be diminished academic opportunities for the students at the three colleges, who now can take a wide variety of majors through JSD. Also, the special interdisciplinary, individual nature of the JSD would probably be lost under this alternative.

c. The Reduced Service Route: Under this option, the three colleges would simply eliminate the academic offerings presently available through JSD.

D. PROGRAM USE

4.1 Program Enrollment:

The Claremont Colleges project a steady enrollment through the 1980s. (see Appendix A)

4.2 Enrollment Capacity:

The question of how many additional students could be taught by the present number of faculty in the current range of course offerings is not really a significant one for the JSD. As noted earlier, the faculty has grown over the years from three to thirteen as student enrollment increased, and any significant increase in enrollment in the future would more than likely justify allocation of additional faculty. The very individual and interdisciplinary nature of the JSD's objectives ("to emphasize individual student-faculty relationship in both course work and in individual research projects") makes the program one unlikely ever to have much unused enrollment capacity.

4.3 Statistical Data:

See Appendix A for data from 1976-77 and 1977-78. In addition to the information provided there, it should be noted that there are 25-30 students majoring in programs through the JSD.

E. PERSONNEL

5.1 Faculty:

Six faculty in biology, four faculty in chemistry, and 3 faculty in physics.

5.2 Staff:

Two full-time laboratory assistants/instructors;
one curator/stock and materials person.

5.3 Classified Staff:

One plus secretary/typist/receptionist.

F. MEASURES OF PROGRAM STRENGTH

6.1 Accreditation:

Because the JSD does not award its own degrees, accreditation is through the individual colleges' accreditation. Visiting teams have consistently spoken highly about the JSD's efforts. Indeed, it has been appraised as a model of cooperative academic programming.

G. FINANCIAL

7.1 Total Program Costs:

See Appendix A

7.2 Outside Funding:

The member colleges have always provided essentially all of the cost of the JSD (i e., no special grant money was used to establish or operate JSD).

H. SUMMARY

The Joint Science Department is advantageous to students in several ways:

a. If offers a program broader and more extensive (in terms of courses and number of majors) than any single college could provide.

b. It offers a special, interdisciplinary program which no single college could afford to provide.

c. It offers students the chance to work on research projects with faculty in a manner and in a setting designed to make such work successful.

The JSD is also advantageous for participating faculty:

a. It offers them the intellectual stimulation which comes from working with colleagues in several disciplines.

b. It offers them the opportunity to work on research projects with students in a manner and in a setting designed to make such work successful.

Summary Cost Benefit Analysis

Perhaps the best testimony to the cost effectiveness of the Claremont Colleges Joint Science Department is the fact that senior college administrators and governing boards do not have or seek to collect the sorts of data most academic departments have come to expect will be used to make judgements about their performance. There are, at Claremont, no figures on dollar cost per credit hour of instruction in the JSD, no statistics on the number of student credit hours generated per full-time faculty allocation. Nor is there a belief that data of this sort would make any more persuasive a "case" (both academic and financial) so abundantly clear already.

Senior college administrators report that they are quite satisfied that the money their institutions spend on the JSD is well spent and is fully justified. They point to the obvious savings which accure from having one classroom/laboratory building complex rather than three. They also cite the number of courses and majors the JSD offers, a large number of which no single institution could or would offer if JSD did not exist. These administrators also cite the growth of JSD faculty allocations from three to thirteen as excellent evidence that over many years (and several changes in Presidents and Deans) the enthusiasm for the academic and financial effectiveness of JSD has grown steadily.

Appendix A

Joint Science Program

Proposed Distribution

1978-79

I. Building Maintenance

College	College FTE Enrollment 1977-78	% of Total	Cost
CMC	836	40.8	$ 34,806
Pitzer	667	32.5	27,726
Scripps	548	26.7	22,778
	2,051	100.0	$ 85,310

II. Instructional Operating Expense

College	1977-78 Program Enrollment	% of Total	Cost
CMC	657	46.2	$ 31,238
Pitzer	360	25.4	17,174
Scripps	403	28.4	19,203
	1,420	100.0	$ 67,615

III. Instructional Personnel

College	Program Enrollment 1976-77	1977-78	Average	% of Total	Cost
CMC	597	657	627	45.2	$166,020
Pitzer	431	360	396	28.6	105,048
Scripps	323	403	363	26.2	96,232
	1,351	1,420	1,386	100.0	$367,300

College	Number of Freshman 1976-77	1977-78	Average	A x .75
CMC	228	266	247	185
Pitzer	191	209	200	150
Scripps	180	162	171	128

MR:mgo
4-13-78

380

Appendix B

The College shares the use of Bridges Auditorium (opposite) and Honnold Library (above).

The Claremont Colleges

But you may find rich learning opportunities around CMC more because of the five nearby colleges than for any other reason. These are The Claremont Colleges — five undergraduate colleges and a graduate school. They are:

Claremont Graduate School
Claremont Men's College
Harvey Mudd College
Pitzer College
Pomona College
Scripps College

Each of the five undergraduate colleges has a four-year academic program leading to its own bachelor's degree. Each has its own campus, its own students and faculty, its own distinctive style. Yet the campuses are just across the street from each other, and together they provide students with facilities and services you would expect to find only at a university.

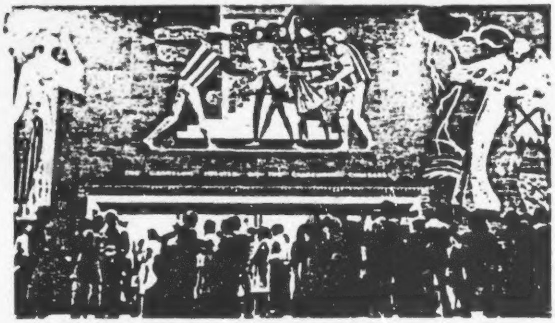
Why this association? Historically, American institutions of higher learning have taken two forms — the large university and the small college. Each has advantages and disadvantages for a student. In trying to meet the educational and research needs of a complex society, the university has grown until it can no longer deal with you as an individual student or require that you participate actively in the learning process. This is precisely what the small college does, offering you closer relationships with a teaching faculty, more effective individual counseling, small classes, and a better opportunity for you to take part in the extracurricular activities you enjoy. On the other hand, the small college cannot provide you the physical facilities, the student services, the wide selection of courses and faculty, or the extensive extracurricular activities offered by a large university.

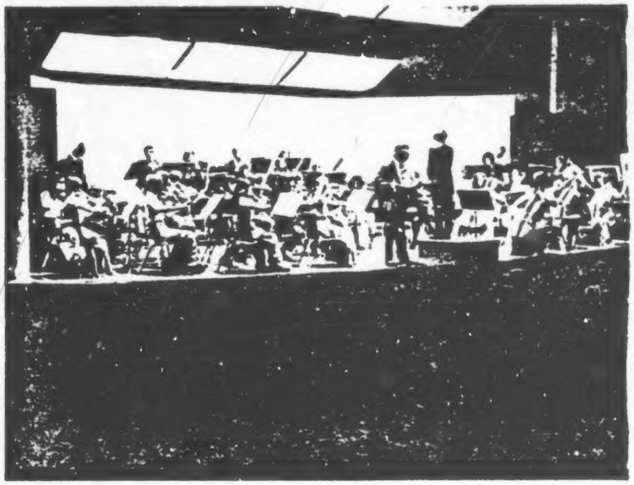
The Claremont Colleges have developed a unique and highly satisfactory solution to this dilemma. Each is small. Each has its own educational emphasis. Learning is active, not passive, because classes are small, and there is one faculty member for every eleven students. Since each college has its own residence halls and dining halls, and nearly everyone lives on campus, no one walks far to classrooms and faculty offices. Furthermore, you may learn from other students with varied interests and backgrounds, and you may undertake responsibility for dormitory regulations and programs.

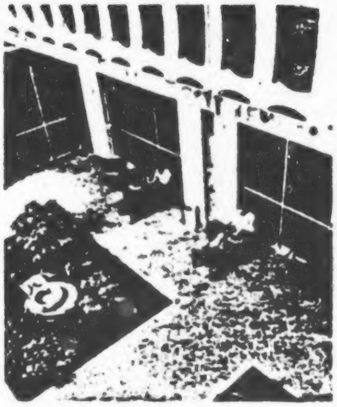
Each of the Colleges places high value on its smallness and its individuality. At the same time we cooperate to provide for all students many facilities and services characteristic of a university. Students in any of the Colleges may take courses in the others. There is a wide choice of extracurricular activities because of the cooperative efforts of students in all of the Colleges. With pooled funds we support a major library system (over one million bound volumes), professionally-staffed medical and counseling services, a 2600-seat concert hall, a center for religious activities, a 700-seat theater, a bookstore which carries nearly 30,000 titles, a computer center (DECsystem 10), and other central services.

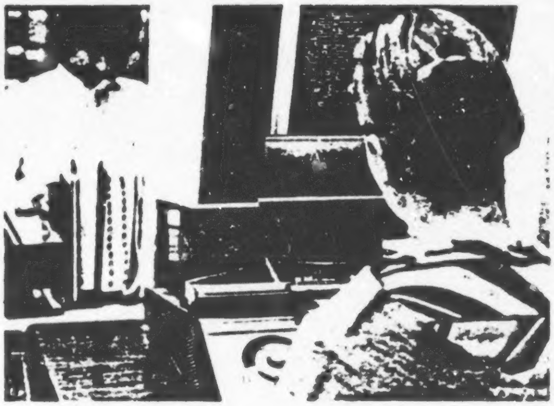
With over 5000 students and over 500 faculty members, the Colleges generate an endless variety of intellectual, cultural, and social activities. Guest speakers, symposia, and conferences are frequent, and there are numerous concerts, art exhibits, film series, and theater productions.

The financial assets of The Claremont Colleges total over $250 million, including substantial endowments in all of the Colleges, more than 100 buildings, and 475 acres of land, 279 now occupied and 196 reserved for professional schools, or affiliated institutions which may be founded in the future. In the next few pages are sketches of the other Colleges.





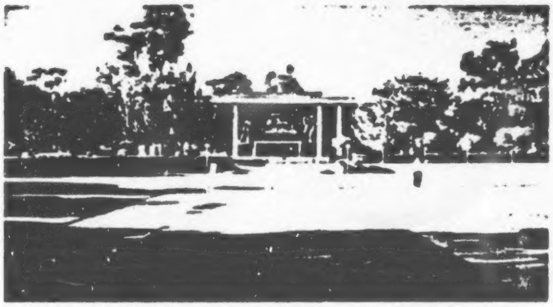
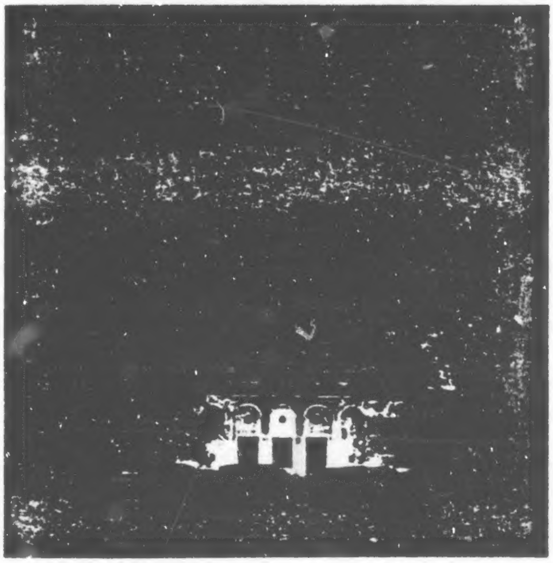




The Claremont Colleges: Shared Resources. Pitzer College offers not only the vigor and opportunities of a young small college, it also provides the benefits of The Claremont Colleges. Five colleges do some things better than one can. For instance:

The Libraries of The Claremont Colleges. At the core of these collections of 924,000 volumes and 7,000 periodical subscriptions are the Honnold Library and the adjoining Seeley Wintersmith Mudd Library. Most of the books Pitzer students need are centrally located in these two large buildings. Smaller, specialized collections reside in the Norman F. Sprague engineering and science library at Harvey Mudd College and in six departmental science libraries at Pomona College, in the Ella Strong Denison Library at Scripps College emphasizing humanities and fine arts, and in the curriculum library and the George C. Stone Center for Children's Books in the Educational Resource and Information Center in Harper Hall.

The Honnold Library possesses extensive holdings of journals and currently receives about 5,500 periodicals and 75 newspapers. Through Pomona College, the Honnold Library is a depository for publications issued by the United Nations, other international agencies, and Great Britain. The library has a large collection of materials in microtext format, including some 18,000 reels of microfilm and 475,000 sheets of other

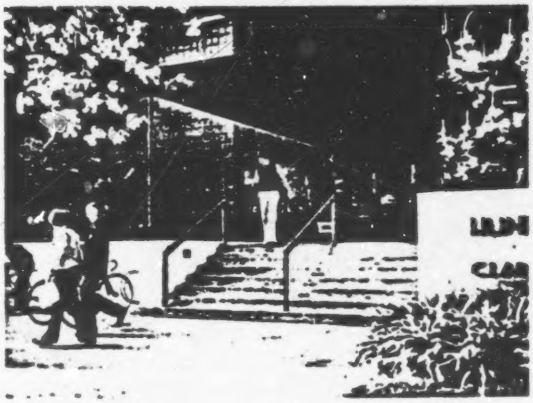
forms of microtext. Included in these holdings are long runs of newspapers, early printed books from England and the United States, and the anthropological source materials in the Human Relations Area Files. The microtext room also houses about 2,000 sound recordings. Some 50,000 slides, 5,000 art prints and photographs, 4,500 sound recordings and 10,000 maps are housed in other academic buildings. The Honnold Library has a good collection of Oriental language materials in its Asian Studies Collection. There are numerous special collections in the library. Among others are the Oxford Collection, books about the University and the City of Oxford, and the Renaissance Collection, volumes on the Italian Renaissance focused on the life and work of Angelo Poliziano.

Three other scholarly libraries catalog their books in Honnold Library — the Francis Bacon Library, comprising materials dealing mostly with Bacon and the seventeenth century; the library of the School of Theology at Claremont; and the library of the Rancho Santa Ana Botanic Garden, the second largest private botanical garden in the United States. Thus, collections available to Claremont students exceed one million volumes. In addition, students have access to most library collections through the Southern California Interlibrary Loan consortium.

Bridges Auditorium. For four decades, this facility — the largest college or university auditorium in the West — has provided programs of major cultural significance for a large geographic area. It is the home of the Claremont Colleges Artist Series and Celebrity Series, which each year present orchestral and dance programs and performances by such artists as Joan Sutherland, Beverly Sills, Victor Borge. Closed for a two-year renovation, Bridges Auditorium opened again in October 1977.

Garrison Theater. Seating 725 people, Garrison Theater provides facilities for the Four College Players, the Pomona College Theater, and other activities of the colleges and the community. Garrison's backstage area can hold sets for as many as three productions at once.

Black Studies Center. The Black Studies Center organizes and coordinates a curriculum in Black Studies taught by faculty members from the several colleges as well as by its own staff. In addition, the Black Studies Center provides counseling and tutoring activities of various kinds and serves as a center for Black social activities.



Chicano Studies Center. Members of the Chicano Studies Center staff join faculty members from individual colleges in teaching courses in the Chicano Studies curriculum, and they also provide various kinds of counseling. The Chicano Studies Center organizes tutoring for students in Claremont and it also serves as a center for Chicano social activities.

The Counseling Center. The Counseling Center is located at 735 Dartmouth, immediately south of the Pendleton Business Office. The staff consists of a psychiatrist, four clinical psychologists, a secretary and a receptionist. The Center's function is to facilitate the development of human skills and competences necessary to live effectively. The Center offers a number of competence learning programs such as assertiveness training, biofeedback training, interpersonal communications skills, study skills, etc. Workshops on human sexuality are usually offered several times each year. Other kinds of group interaction programs are also offered.

Students with personal concerns or those who simply wish to talk with someone about themselves are welcome. Vocational counseling and testing are offered throughout the year.

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Baxter Medical Center. Staffed by three doctors and four nurses, Baxter is open from 9-12 and 1:30-5:00, Monday through Friday. Consultation and treatment in the Health Service are available to students without charge. A charge is made for medicines, laboratory tests, and special supplies. Consultation and treatment by specialists in all fields can be arranged when needed. Outside consultation, hospitalization, and surgery are arranged by Baxter Medical Center but are not financed by the College, and payment for them is a responsibility of the individual student. Pomona Valley Community Hospital, four miles from campus, is fully equipped to deal with serious illness or injury.

The college does not assume responsibility for the complete medical care of its students, but only insofar as its present facilities will afford. An accident and hospital reimbursement plan is available to all full-time students to protect against major costs. It supplements the care provided by Baxter Medical Center. It includes benefits for accidental injuries, hospitalization, surgery, doctor's visits in the hospital, emergency care, and ambulance. *Students not covered by other insurance plans are urged to consider this plan seriously.* Detailed information is mailed to each student, usually during August, and is also available from Baxter.

Huntley Bookstore. Supplementing collections available at stores nearby, the large Huntley Bookstore maintains supplies of books for most courses taught at the Colleges as well as extensive general collections of books, art supplies, and other paraphernalia. Huntley regularly carries more than 20,000 titles.

McAlister Center for Religious Activities and the Office of the Chaplains. Religious activities are ecumenical in scope and completely voluntary. There are regular services of worship on campus, study groups, retreats, workshops, and opportunities for service to others sponsored by the Office of the Chaplains. The full-time professional staff includes a protestant minister, a Roman Catholic priest, and a rabbi, and their joint ecumenical ministry welcomes the ideas, questions, and participation of all students and faculty. The building contains chaplains' offices, a meeting room, meditation chapel, and library.

Joint Science Center. Sponsored by Pitzer College, Scripps College, and Claremont Men's College, the Joint Science Center is staffed to provide thorough work in physics, chemistry, biology, and human biology, and is housed in modern and spacious facilities adjacent to the Scripps College campus.

Robert J. Bernard Biological Field Station of The Claremont Colleges. The ecological programs of Pitzer College, and all of The Claremont Colleges, are in the process of being strengthened considerably through the addition of a biological field station. This "station," made possible through the generosity of friends of The Claremont Colleges, is being developed in approximately 80 acres of land only several blocks walking distance from the campuses. The land contains units of oak chaparral and coastal-sage-scrub as well as parcels in various stages of ecological succession. Aquatic observations and studies will begin soon on a lake, marsh and stream ecosystem scheduled for completion by 1978. The station is envisaged as meeting many ecological and environmental classroom and research needs of students and faculty alike.

The Faculty House. Pitzer shares with the other Claremont Colleges the Faculty House which the late Harvey S. Mudd and Mrs. Mudd and the Seeley W. Mudd Foundation gave to Claremont University Center for the use of the faculties of all the colleges at Claremont. Situated just south of the Honnold Library, the Faculty House provides a meeting and recreational center for faculty groups.

Rancho Santa Ana Botanic Garden. The Rancho Santa Ana Botanic Garden, affiliated with Pomona College and the Claremont Graduate School, is an independent, endowed institution devoted to the preservation of native California flora and to research and teaching in the fields of botany and horticulture. The Pomona herbarium and part of the Pomona botanical library are housed at the garden. The beautifully landscaped grounds of the garden are open to visitors throughout the year.

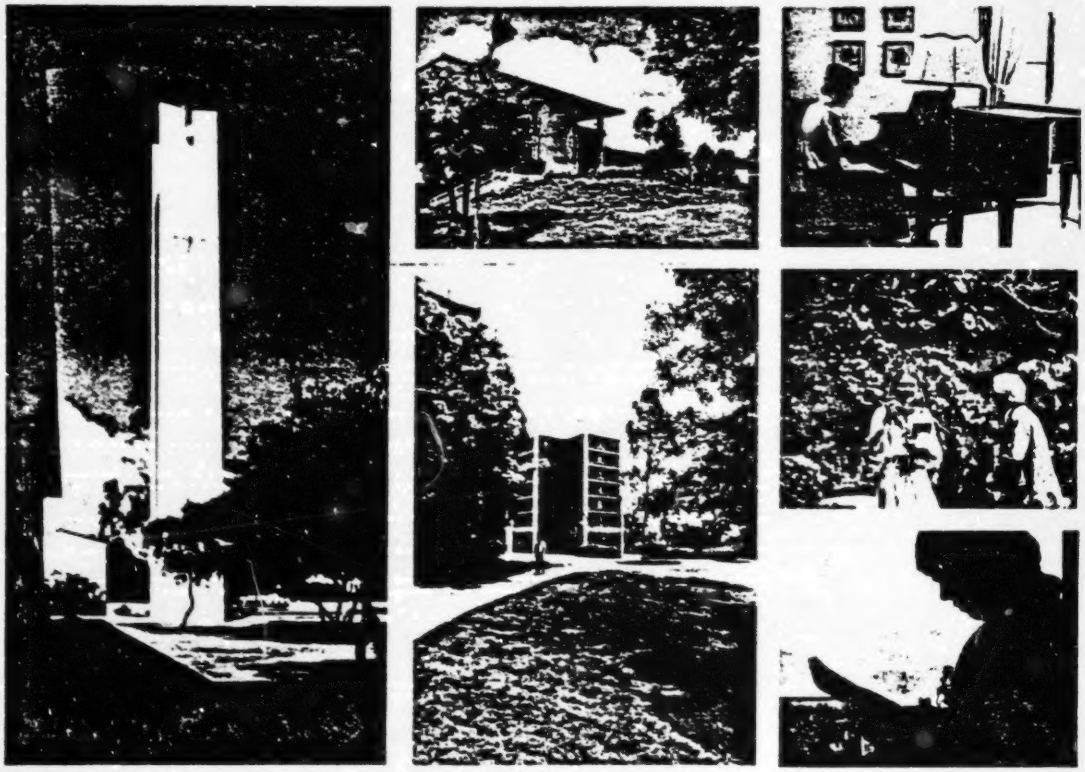
Other facilities. Other facilities contribute substantially to the smooth functioning of The Claremont Colleges and are important parts of its design: Pendleton Business Building and The Center for Urban and

Regional Studies. Also in Claremont, and staffed by men and women who often have professional connection with The Claremont Colleges as well, are Blaisdell Institute (for world religions), Francis Bacon Library, The School of Theology at Claremont, and The Center for Antiquity and Christianity. The nature of their affiliation with The Colleges varies.

The Other Claremont Colleges. Composed of five undergraduate colleges, one graduate school, and a university center which maintains central facilities, The Claremont Colleges are unique among the world's institutions of higher education: each is independent of the others, setting its own degree requirements and establishing its own curriculum, but all share central facilities. They are Pomona College, Claremont Graduate School, Scripps College, Claremont Men's College, Harvey Mudd College, Pitzer College, and Claremont University Center.

Pomona College. Founded in 1887. Enrollment, 1300. The founder member of The Claremont Colleges, Pomona is a coeducational liberal arts college with full offerings in all major fields of the arts, humanities, social sciences, and natural sciences. The curriculum is designed to cultivate rigorous thought and esthetic sensibilities and to foster a comprehensive understanding of mankind and the universe.

Claremont Graduate School. Founded in 1925. Enrollment, 1550. Claremont Graduate School is an independent, privately supported institution devoted to study beyond the bachelor's degree. It offers study in the humanities, mathematics, psychology, botany and



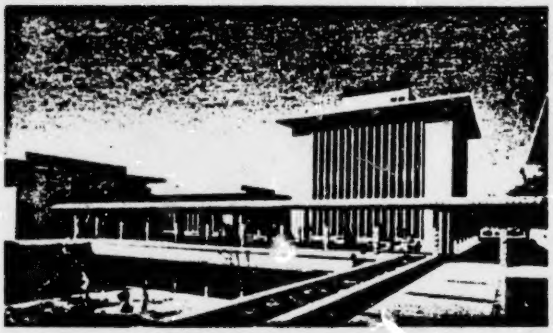
social sciences, business and management, fine arts, and education, awarding both master's and doctoral degrees.

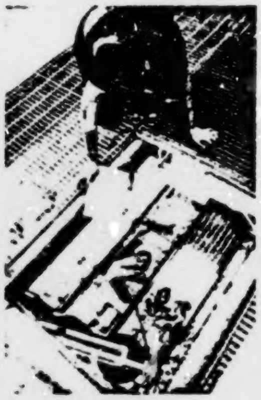
Claremont Men's College. Founded in 1946. Enrollment, 800. Claremont Men's College is a liberal arts college with special emphasis in public affairs. It offers majors for both men and women in the fields of political science, economics, history, foreign languages, literature, philosophy, psychology, sciences, mathematics, and management-engineering.

Scripps College. Founded in 1926. Scripps College is a women's college with an enrollment of 600. The college is noted for the special series of courses which compose its core Humanities curriculum and emphasize an interdisciplinary approach to learning. Scripps offers a Bachelor of Arts degree; concentrations are available in five fields: The Arts, Languages and Literature, Philosophy and Religion, Science and Social Studies.

Harvey Mudd College. Founded in 1955. Enrollment, 480. Harvey Mudd is a coeducational college of engineering and science stressing human values. Students major in engineering, mathematics, physics, or chemistry. Five-year programs in engineering are also offered.

Claremont University Center. Founded in 1925. This is the central coordinating institution of the group, and one of its responsibilities is the operation of Claremont Graduate School. It owns and operates such joint facilities as library, auditorium, theater, business office, health service, bookstore, religious center, and centralized utilities. It also holds adjacent undeveloped land and is responsible for establishing new colleges.





Appendix D

CURRICULAR OPPORTUNITIES

The privilege of cross-registration at the other Claremont Colleges is one of the advantages which Scripps offers students as a member of The Claremont Colleges consortium. Through cross-registration the student may enroll in many courses which complement those she takes at Scripps. She may also petition the Committee on Academic Review (CAR) for an off-campus concentration.

CROSS-REGISTRATION AT OTHER CLAREMONT COLLEGES

Students may enroll, without express permission of the Dean of the Faculty, if off-campus courses fall within these guidelines:

1. Freshmen normally register for their entire first-semester program at Scripps. Second semester freshmen may register for one course in one of the other Claremont Colleges. It is generally required that students take most of their introductory work on the home campus.
2. Sophomores may register for two courses per year at other Claremont Colleges.
3. Juniors and seniors may register for one-half of their total program in any one year outside Scripps.

Courses listed as "G" (Intercollegiate) or "CC" (Claremont Colleges) are considered as courses offered by the home campus and need no special permission.

Cross-registration for courses in excess of the specified number must have the signed permission of the Dean of the Faculty. *There is no additional cost for enrolling in courses at the other Colleges.*

4. Students interested in any foreign study should apply to the Foreign Studies Committee by March 1st for approval of their proposed program. Applications and information are available from the Language faculty secretary.

THE CLAREMONT COLLEGES

Each of the five undergraduate Claremont Colleges has a four-year academic program leading to a bachelor's degree. Each has its own complete campus, students and faculty, its own educational emphasis and distinctive style. The campuses lie adjacent to one another and together provide students with services and facilities characteristic of a university.

Enrollment in each of the Colleges ranges from 486 to 1300. Because each College has its own residence halls and dining halls and because students live on campus, the convenience of proximity to classrooms and faculty offices is a real advantage. All of the Colleges attract and seek students of varied interests and backgrounds.

In addition to offering cross-registration, The Claremont Colleges cooperate to provide for all students many facilities and services. The most notable of these are The Libraries of The Claremont Colleges, having more than 900,000 volumes, a computer center, a Black Studies Center and a Chicano Studies Center, Bridges Auditorium (a 2600-seat concert hall newly renovated), the Garrison Theatre, Baxter Medical Center, the Infirmary, and the Counseling Center.

Other intellectual and cultural centers such as the Blaisdell Institute for Advanced Study in World Cultures and Religions, the Institute for Antiquity and Christianity, and The Rancho Santa Ana Botanic Gardens are affiliates of The Claremont Colleges. The centrally located Huntley Bookstore serves all Claremont students and faculty.

With nearly 5,000 students and over 500 faculty members, the Colleges generate an endless variety of cultural and intellectual activities. Guest speakers, symposia, and conferences are frequent; there are numerous art exhibits, concerts, film series, and theatre and dance productions.

Each of the Colleges has activities in which its own students participate and each attracts a variety of speakers and lecturers, but in many activities students from the various campuses work together (See Organizations/Activities/Cultural Opportunities).

POMONA COLLEGE

Pomona College, incorporated in 1887, is a coeducational college of Arts and Sciences enrolling 1300 students. It offers 31 areas of concentration leading to the Bachelor of Arts degree. The founding member of The Claremont Colleges, Pomona College early met a need for higher education in southern California. Among the Pomona facilities that are of interest to all Claremont students is the Oldenborg Center for Modern Languages and International Relations. The Montgomery Art Building is a part of The Galleries of The Claremont Colleges, as is Scripps' Lang Art Gallery.

CLAREMONT MEN'S COLLEGE

Claremont Men's College, founded in 1946, currently enrolls 800. It became coeducational in 1976. Also a Liberal Arts College, curricular emphasis at CMC is placed on business and public affairs, with strong programs in Political Science and Economics. The CMC campus borders the Scripps campus on the south.

HARVEY MUDD COLLEGE

Harvey Mudd College, founded in 1955, is a school of Engineering and Science. It has an enrollment of 454, admits both men and women, and offers a Bachelor of Science degree in Engineering, Chemistry, Physics and Mathematics. HMC also offers a five-year Master of Engineering degree. The campus borders the Scripps campus on the north, and houses the print-making facilities of the Scripps Art Program within the Libra complex.

PITZER COLLEGE

Pitzer College, the sixth and newest member of The Claremont Colleges, was founded in 1963 as a women's college. In 1970 Pitzer became coeducational, and currently enrolls over 700 students. Pitzer emphasizes the Social and Behavioral Sciences — Psychology, Political and Environmental Studies, Economics; and has developed strengths as well in the Arts and Humanities — Language and Literature, the fine and performing arts, Philosophy and History.

CLAREMONT GRADUATE SCHOOL

Claremont Graduate School is devoted to study beyond the bachelor's degree in the Humanities, Social Sciences, Psychology, Mathematics, Botany, Fine Arts, Education and Business. It confers Master's, Master of Fine Arts and Doctoral degrees. CGS has about 1,550 students and a core faculty of 55. The faculty is augmented by the undergraduate facilities of the other five Claremont Colleges. At any given time about 250 faculty men and women are participating in graduate teaching. Claremont Graduate School is the academic arm of Claremont University Center, the central coordinating institution of The Claremont Colleges. It was founded in 1925.

Claremont University Center, Central Facilities

A. Black Studies Center
B. Black and Chicano Admissions Offices
C. Garrison Theater
D. Harper Hall
E. Chicano Studies Center
F. McAlister Religious Center
G. Harvey Mudd Quadrangle
H. Seeley W. Mudd Memorial Library
I. Honnold Library
J. Earl W. Huntley Book Store
K. Campus Security Department
L. Program for Public Policy Studies
M. Pendleton Business Building and Personnel Center
N. Counseling Center
O. Faculty House
P. Baxter Medical Building
Q. Seaver Computer Center
R. Bridges Auditorium (Pomona Campus)
S. Doyle Supply Building (Pomona Campus)
T. Physical Plant Department (Pomona Campus)

Coordinated Facilities

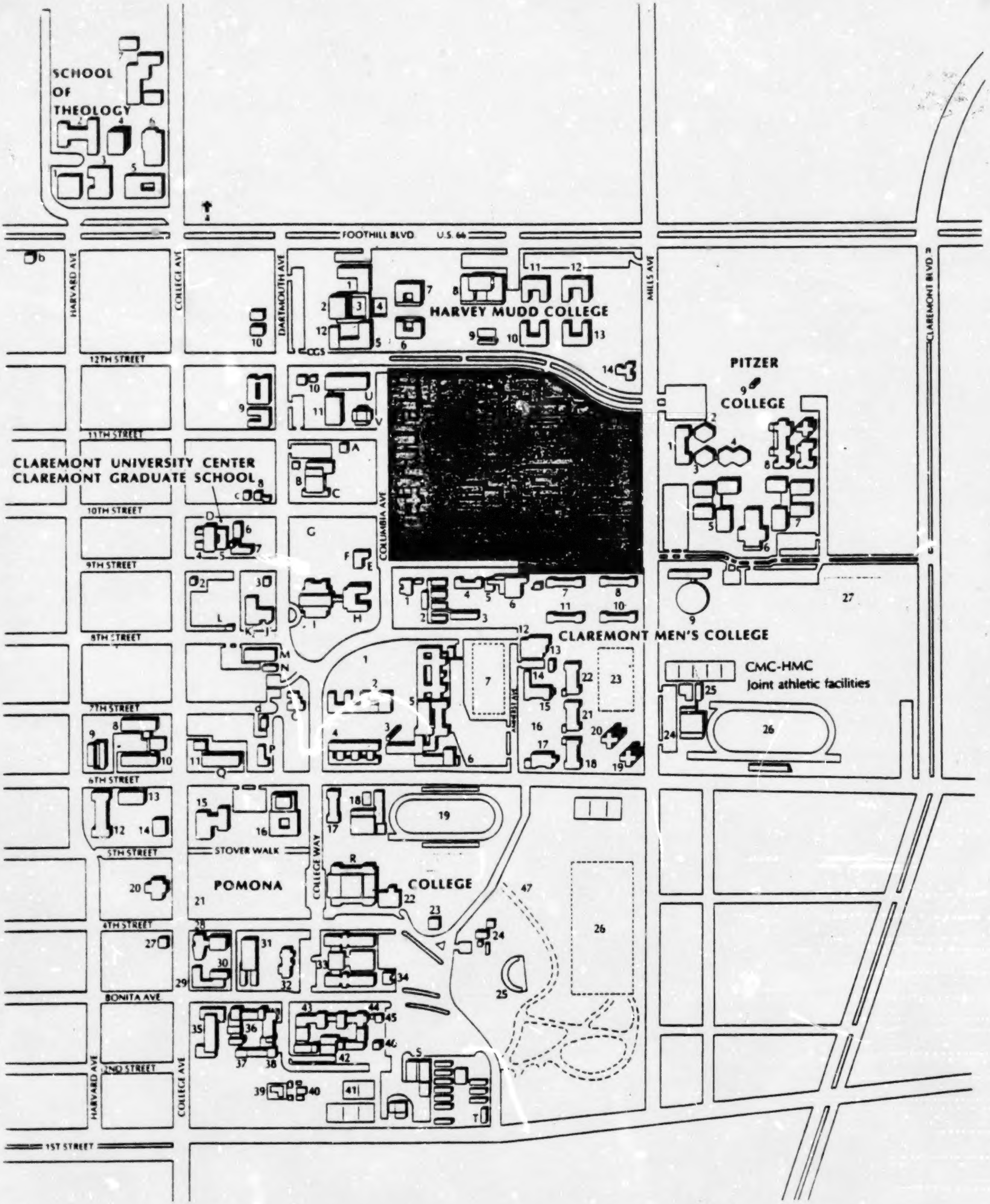
U. Joint Science Center—CMC, Pitzer, Scripps
V. Baxter Science Lab.—CMC, Pitzer, Scripps
W. Office for Continuing Education (in Harper Hall)

Claremont Graduate School

1. Stone Children's Book Center (in Harper Hall)
2. Philosophy Department
3. Institute of Antiquity and Christianity
4. Harper Hall
5. W.S. Rosecrans Tower
6. Harper Hall East
7. McManus Hall
8. Claremont Institute of Administrative Studies
9. Graduate Residence Halls
10. Eyre Children's School
11. Benezet Graduate Psychology Building
12. Art and Mathematics Departments (Harvey Mudd Campus)

Claremont Men's College

1. Athenaeum
2. Pitzer Hall
3. Seaman Hall
4. Pitzer Hall North
5. McKenna Union
6. McKenna Auditorium
7. Wohlford Hall
8. Boswell Hall
9. Bauer Center
10. Green Hall
11. Appleby Hall
12. Collins Hall
13. Story House
14. Beckett Faculty Apt.
15. Beckett Hall
16. Badgley Garden
17. Marks Hall
18. Benson Hall
19. Claremont Hall
20. Fawcett Hall
21. Berger Hall
22. Phillips Hall
23. Parents' Field
24. Gymnasium
25. Voit Pool and Field House
26. Football Field
27. Baseball Field


SCHOOL OF THEOLOGY
FOOTHILL BLVD. U.S. 66
HARVARD AVE
COLLEGE AVE
DARTMOUTH AVE
COLUMBIA AVE
MILLS AVE
CLAREMONT BLVD
HARVEY MUDD COLLEGE
CGS
PITZER COLLEGE
12TH STREET
11TH STREET
10TH STREET
9TH STREET
8TH STREET
7TH STREET
6TH STREET
5TH STREET
4TH STREET
BONITA AVE
2ND STREET
1ST STREET
CLAREMONT UNIVERSITY CENTER
CLAREMONT GRADUATE SCHOOL
CLAREMONT MEN'S COLLEGE
AMHERST AVE
CMC-HMC
Joint athletic facilities
STOVER WALK
COLLEGE WAY
POMONA COLLEGE

Harvey Mudd College

1. Parsons Engineering Building
2. Sprague Memorial Library
3. Galileo Hall
4. Hixon Court
5. Science Building
6. Kingston Hall
7. Thomas Garrett Hall
8. Joseph B. Platt Campus Center
9. Swimming Pool
10. West Hall
11. Marks Residence Hall

12.-13. Seeley W. Mudd Quadrangle and Residence Halls—
North Hall (12.)
East Hall (13.)

14. President's House

Pitzer College

1. Scott Hall
2. Bernard Hall
3. Fletcher Hall
4. Avery Hall
5. Sanborn Hall
6. McConnell Center
7. Holden Hall
8. Mead Hall
9. Pellissier Mall and Brant Tower

Pomona College

1. Harwood Garden
2. Walker Hall
3. Smith Tower
4. Clark Hall
5. Frary Hall
6. Norton Hall
7. Athearn Field
8. Seaver Chem. Lab.
9. Thille Botany Building
10. Seaver Bio./Geo. Lab.
11. Millikan Laboratory
12. Mason Hall
13. Crookshank Hall
14. Pearsons Hall
15. Holmes Hall
16. Edmunds Union
17. Smiley Hall
18. Memorial Gym.
19. Alumni Field
20. Carnegie Building
21. Marston Quadrangle
22. Renwick Gymnasium
23. Replica House
24. Brackett Observatory
25. Greek Theater
26. Earl J. Merritt Field
27. President's House
28. Thatcher Music Building
29. Montgomery Art Building
30. Rembrandt Hall
31. Bridges Hall of Music and LeBus Court
32. Sumner Hall
33. Oldenborg Center
34. Director's Residence
35. Wig Hall
36. Harwood Court
37. Harwood Dining Hall
38. Olney Dining Hall
39. Swimming Pool
40. Pendleton P.E. Center
41. Rogers Tennis Courts
42. Gibson Dining Hall
43. Blaisdell Hall, Mudd Hall
44. Housing Office
45. Brackett House
46. Kenyon House
47. Blanchard Park

Scripps College

1. Grace Scripps Hall
2. Toll Hall
3. Browning Hall
4. Dorsey Hall
5. Senior Apartments
6. Frankel Hall and Routt Hall
7. Swimming Pool
8. Service Building
9. Denison Library
10. Balch Hall
11. Lang Art Building
12. Humanities Building
13. Music Building and Dance Studio
14. Margaret Fowler Garden
15. Kimberly Hall
16. Wilbur Hall
17. President's House
18. Alumnae Field

Affiliated Institutions

a Rancho Santa Ana Botanic Garden
b Center for California Public Affairs
c Blaisdell Institute
d Francis Bacon Library

School of Theology at Claremont

1. Seeley G. Mudd Memorial Communications Building
2. Disciples Housing
3. Library
4. S.S. Kresge Memorial Chapel
5. Administration Building
6. Academic Building
7. Methodist Housing

DIRECTIONS TO THE COLLEGES

Major highway routes to The Claremont Colleges are Freeway I-10 (the San Bernardino), Freeway 57 (the Orange), Freeway U.S. 60 (the Pomona), and Freeway I-210 (the Foothill).

To reach Claremont from any area except Pasadena go on I-10 to Indian Hill Boulevard (exit 47), and drive north. It is one mile to Second Street in the village. Turn right three blocks to the colleges. To reach I-10 from Orange County and south, take 57, or, from Long Beach, take I-605. From west and southwest Los Angeles, take U.S. 60 to 57 to I-10.

From Pasadena and the San Fernando Valley, take I-210 east until it terminates at Foothill Boulevard. Drive three miles farther and turn right on Dartmouth Avenue.

COMBINED DEGREE PROGRAMS

Seeking to meet the career-preparation interests and needs of her students, Scripps College offers to a few especially well-qualified women an option among five combined B.A.-Master's degree programs of particular career usefulness. All five are accelerated programs. All depend on the student fulfilling her basic requirements for the

Scripps degree, including the greater part (and in one case all) of her major concentration requirements, before she enters the graduate component of the program in her fourth year. Four of these combined degree programs are offered in cooperation with the Claremont Graduate School. Each program has an official adviser on the Scripps campus who should be seen for advice and explicit information regarding course-planning, prerequisites, admissions procedure, and questions of tuition and financial aid.

Scripps also makes available the option of a dual B.A.-B.S. program in engineering with Stanford University,. This program is directed at those students who want to combine a thorough grounding in the Humanities and the Liberal Arts with a major concentration in one or other area of Engineering at Stanford. The student who is interested in this program should see one of its official advisers in the Joint Science Department at the earliest opportunity for course-planning and advice.

B.A.-M.A. in Government with Claremont Graduate School. A well-qualified student in any major concentration may apply for admission to the program, and need not be a Political Science or International Relations concentrator. The graduate program in Government, which the student begins in her fourth year, comprises a minimum of 30 units (i.e., seven and one-half semester-length courses) of graduate study. Upon successful completion of the requirements for both degrees, the Scripps B.A. and M.A. in Government will normally be awarded at the end of four and one-half years of study. Professor James Gould is the Scripps adviser for this program and should be consulted for information about course content.

B.A.-M.A. in Religion with Claremont Graduate School. This program is intended as an accelerated four and one-half to five year course of study for undergraduate Religion students interested in completing an M.A. in Religion. Students must have completed twenty-eight courses including all general requirements and six courses toward the Religion major at Scripps before entering upon the M.A. program as full-time students. In addition, it is strongly recommended that these students have attained reading competency in either French or German and be familiar with any other languages needed for their special area of concentration in Religion. Application for admission to the program should be made at least one semester in advance of the semester in which the students wish to enroll in the program. Students admitted to the program must complete thirty units of graduate work either in the general program in Religion or in one of the areas of specialization offered by the graduate Religion Department: Old Testament, New Testament, Church History, Philosophy of Religion and Theology, Ethics and Society. Upon successful completion of the requirements for both degrees, the B.A. and the M.A. are awarded. Professor Kathleen Wicker is the Scripps adviser for this program.

B.A.-M.I.S. (Master's in International Studies) with Claremont Graduate School. In order to qualify for this program the undergraduate student does not need to concentrate in International Relations, but if she does not she should plan to take some work in American Government and Economics as preparatory electives in her undergraduate program. She must offer at least one strong foreign language, and preferably two; and if she plans well enough in advance, the student may be able to accommodate a year or semester abroad in her schedule. The graduate program in International Studies, which the student begins in her fourth year, comprises 40 units (10 courses) of graduate study. Depending on successful completion of the requirements for both degrees, the B.A. and the M.I.S. are normally awarded together after five years. Professor James Gould is the official Scripps adviser for the B.A.-M.I.S.

B.A.-M.P.P.S. (Master's in Public Policy Studies) with Claremont Graduate School. This program combines requirements for the Scripps degree with a master's program which concentrates on interdisciplinary study of the problems of contemporary society, focusing on theoretical and methodological constructs from various social science disciplines in the analysis of public policy problems. Although the Scripps candidate for this combined degree program by no means needs to undertake a major concentration in a social science, she is advised to take as prerequisites one course each in American Government and basic Economics, and to participate for one semester's course credit in The Claremont Colleges' undergraduate Program in Public Policy Studies. The M.P.P.S. program, which again the student begins in her fourth year, comprises 30 units of graduate study. The B.A. and M.P.P.S. degrees, successfully completed, are normally awarded after four and one-half years. Although it is not mandatory, the student should consider taking the first two required Public Policy Clinic courses in the summer following the fourth year. Professor James Gould advises for this program at Scripps.

B.A.-M.B.A. (Master's in Business Administration) with Claremont Graduate School. Professor Bradford Blaine is the Scripps adviser for the combined B.A.-M.B.A. program. This program does not require an undergraduate concentration in Economics; the Claremont Graduate School encourages applications from liberal arts concentrators who have acquired a certain degree of mathematical sophistication. The prerequisite mathematics courses are available by cross-registration at CMC or at Pomona. The graduate program in Business Administration at Claremont Graduate School comprises 40 units of graduate study. Assuming successful completion of the joint program, both degrees are normally awarded at the end of five years.

B.A.-B.S. in Engineering with Stanford. Professors Jack Merritt and Leonard Dart of the Joint Science Department advise students who are interested in the B.A.-B.S. program in Engineering with Stanford. The student enrolled in this program spends three years at Scripps and then transfers to Stanford for two years' work in Engineering. After five years she earns both the Scripps B.A. and the Stanford B.S. For students who gain admission to Stanford in order to complete this program, the College waives its normal requirement of residency at Scripps during the fourth year. Early planning is mandatory for the student interested in this program, for during her three years at Scripps the student must satisfy not only her basic Scripps degree requirements in Humanities and competencies in English writing and in Language, she must also complete a seven-course major concentration including a thesis, and take as prerequisites for Engineering four Mathemetics and four Science courses. The Mathematics courses must compose a basic Calculus sequence: e.g., CMC's Math 30, Calculus 1; Math 31 and 32, Calculus II and III; and Math 111, Applied Advanced Calculus (or their equivalents). These four Science courses are suggested: Science 14, Chemistry; Science 33 and 34, Physics; and one advanced Science course, such as Science 101, Theoretical Mechanics, or Science 102, Electricity and Magnetism.

Admissions Procedures

For the programs arranged with CGS, students will make application to the Graduate School at the end of their junior year at Scripps. Students will be admitted to the Claremont Graduate School who have demonstrated a level of achievement indicative of success in graduate work, particularly in their area of major concentration, as shown by supportive letters of recommendation, and, as necessary, personal interviews and submission of written work. Admission depends upon approval of the faculty and chairman of the given master's program with concurrence of the Graduate School Dean of Admissions. Candidates for the M.A. in Government and Religion, the M.I.S., and the M.P.P.S. will be required to take the Graduate Record Exam no later than November of their fourth (or senior) year. Candidates for the M.B.A. will take the Graduate Management Aptitude Test no later than the January giving of that test in their third year.

The admission process to Stanford for the dual B.A.-B.S. Engineering program should be begun with the aid of the program's advisers in the autumn of the student's third year at Scripps. Students must have maintained at least a B average in their years at Scripps, must have acceptable scores on the College Board Scholastic Aptitude Test, and must be recommended by the Scripps faculty and by the program's adviser in the Joint Science Department.

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A. PROGRAM IDENTIFICATION - Greensboro Regional Consortium

1.1 Title of Program: Bachelor of Fine Arts Degree Program

1.2 Administrator: Dr. William Lanier, Executive Director, Greensboro Regional Consortium, Inc.

1.3 Participants:

Greensboro College
Guilford College
Bennett College

1.4 Enrollment:

See section 4.1

B. PROGRAM OBJECTIVES

2.1 Objective:

To provide a quality Bachelor of Fine Arts program for the students of the three member institutions.

2.2 Descriptive Information:

Art faculty at each institution are hired to provide necessary complementarity needed to offer courses required for the jointly sponsored Bachelor of Fine Arts Degree Program. Curriculum is determined by the faculty as a group; syllabi are prepared for each course and are given to each faculty member to avoid duplication of contents; copies of the syllabi are on file in the Consortium director's office. The program is available to students through regular cross-registration channels.

C. CONTEXT

3.1 Brief History of the Program

In 1973, each of the colleges in the Greensboro Regional Consortium had an independent art department. Faculty agreed that the quality needed upgrading. The administrators agreed that costs were too high. Richard Meeth was employed in 1975 to make a study of costs and present recommendations.

At Bennett College, the direct cost per credit hour (faculty salary and departmental budgets) was $41.36. Nine courses were offered for a total of 88 students, of which only two were majors. There was one full-time and one half-time faculty member. Meeth recommended that the art program be abolished.

At Greensboro College, one full-time and several part-time faculty (2.13 FTE) taught 25 courses for 313 students (21 majors). The direct cost per credit hour was $25. The recommendation was to reduce the number of courses offered.

At Guilford College, there were no drastic recommendations. 2.57 FTE teachers taught 12 courses for 357 students (23 majors). The direct cost per credit hour was $27.33

These problems were compounded by the fact that good students were leaving each year to attend other institutions. The faculty at each institution, and at the combined institutions, had similar competencies and backgrounds. Most were skilled in painting or art education. There was little versatility and all course offerings were very similar. There was little offered in art history, and no graphics. Any student wanting to cast in metal had to take the courses at the University of North Carolina, Greensboro. In addition, the general facilities were poor.

All institutions wanted to retain art as a part of their curriculum, but only if the quality could be improved. It was decided that a joint BFA in Art would be developed. A formal agreement stipulated goals and operational procedures. Consultant assistance was brought in to assist in planning and in curriculum revisions. The institutions realized that the conversions initially would be expensive, but that they were necessary if quality was to be achieved.

Faculty strengths were increased in several ways: one faculty member retired; one was required to obtain an MFA in order to continue teaching; one went on leave for doctoral study; one graphics person was employed. A recent joint faculty art exhibit clearly demonstrated the versatility and strengths of the three faculties.

Guilford College converted an old dormitory into a versatile and desirable art building.

3.2 Relation to Institutional Objectives:

The program assists in fulfilling similar institutional objectives of quality in academics and in producing quality programs as economically as possible.

3.3 Could or would this program be offered if the Consortium did not exist?

Prior to 1976 each institution was offering a separate art program; each was dissatisfied with quality; each reported that costs of providing the kind of program desired was too expensive individually. Although courses in art would certainly continue at some level, with Guilford College most likely offering the largest number, the BFA program is built on joint participation and would be greatly hampered if the consortium did not exist.

D. PROGRAM USE

4.1 Program Enrollment:

The table below shows enrollment in the program in 1975-76 (the year prior to the beginning of the BFA) and for 1978-79 at each of the institutions.

	Bennett		Greensboro		Guilford	
	75-76	78-79	75-76	78-79	75-76	78-79
Enrollment	79	153	143	201	445	500
Majors	2	9	20	29	23	23

After three years of operation, the total number of majors has increased by 16 and the total number of non-majors enrolled has increased by 187. Although, certainly, all problems in the new program have not been solved, the evaluation at the end of the 1978-79 academic year noted a strong foundation core to insure an adequate background for upper level concentration, a broader curriculum from which students could choose, an emphasis on professionalism, and a stronger art faculty. In actual numbers, however, the faculty had been increased only by 1½ FTE.

E. PERSONNEL

5.1 Faculty:

Five full-time and two part-time faculty members participate in the program.

F. MEASURES OF PROGRAM STRENGTH

6.1 Accreditation Status:

Degrees are granted by the individual institutions; each institution is accredited by the Southern Association of Colleges and Schools.

6.2 Certification:

Not applicable.

6.4 Other Measures of Program Strength:

Faculty strengths were increased in several ways: one faculty person retired; one was required to obtain an MFA in order to continue teaching; one faculty is on leave for doctoral study; a graphics person was employed. A recent joint faculty art exhibit clearly demonstrated the versatility and strengths of the three faculties. Guilford College converted an old dormitory into an art building. In addition to a wide variety of course offerings, a New York seminar is available for student participation. A European study summer program, supervised by faculty is also available to all students.

Both external and internal evaluations have verified the strength of the program. These evaluations are on file in the consortium office.

G. FINANCIAL

The table below indicates faculty salaries and departmental costs for the year prior to the beginning of the new program and for the current 1978-79 academic year.

Bennett College:

	'75-76	'78-79
Faculty Salaries	$11,500	$21,840
Departmental Budgets	1,500	2,650
Total	$12,000	$24,490

Greensboro College:

	'75-76	'78-79
Faculty Salaries	$17,000	$29,350
Departmental Budgets	1,300	2,150
Total	$18,300	$31,500

Guilford College:

	'75-76	'78-79
Faculty Salaries	$41,750	$72,700
Departmental Budgets	4,124	14,015
Total	$45,874	$86,715

Guilford College renovated its facilities and also increased expenditures much more than the other two institutions; however, it now hosts annual summer workshops and programs which net the institution about $15,000 each summer, according to the Finance Officer at Guilford.

The cost effectiveness of this program lies solely in current costs as opposed to projected costs of each institution attempting to achieve the same quality individually. At each institution, the cost could be at least doubled for minimum effectiveness and tripled if the same degree of versatility in faculty and in variety of course offerings were to be retained. Such financial expenditures are unwarranted with the current number of majors.

Therefore, this program is cost effective, rather than cost saving. The cost effectiveness has allowed the institutions not only to meet their objectives of retaining art in the curriculum, but also in greatly increasing the quality of their art offerings.

A. PROGRAM IDENTIFICATION - Greensboro Regional Consortium

1.1 Title of Program: Summer School

1.2 Administrator: Dr. William Lanier, Executive Director,
Greensboro Regional Consortium, Inc.

1.3 Participants:

Greensboro College
Guilford College
Bennett College

B. PROGRAM OBJECTIVES

2.1 Objective:

The objective of the summer session is to provide courses for the regional clientele who must utilize summers for upgrading, certification continuance/completion, and/or degree augmentation/completion. This objective is an extension of objectives operable during the regular academic year at each institution.

So that operational aspects are clear and timely, the Summer School operational agreement is reviewed each year and a new agreement signed (copy of 1979 Agreement attached).

2.2 Descriptive Information:

The Summer School is held on the Guilford College campus (see 3.1 for history of location); courses offered speak to regular demand and special needs; faculty are chosen from the three institutions with salaries determined by the current contract between the Consortium and the three institutions. Distribution of funds at the end of the term are also determined by the contract. (See Section G for examples of distribution of funds.)

C. CONTEXT

3.1 Brief History of the Program

During the 1967-68 academic year, continuous discussions took place regarding prospects for a joint Summer School to involve all three institutions of the Consortium.

Historically, Bennett had never provided a summer session, while Guilford offered two six-week sessions on two campuses. The residential campus summer school offered a limited curriculum for students enrolled there, while the Evening School (primarily continuing education) offered two six-week sessions for night students at the Downtown Campus. Greensboro College also offered a limited program in two six-week sessions. Enrollments were good during the 60s since the three schools enjoyed peak enrollments during the academic year. Even with good enrollments, however, the summer sessions seldom broke even financially because of salaries for small classes and the costs of operation. Records indicate that salaries often equalled the income but other expenses had to be absorbed in the total academic program. It is difficult to determine actual expenses prior to the Consortium agreement since all expenses except salaries were lumped together with other operating expenses.

The joint Summer School began its operation in 1969, operating on a set budget audited separately through the Greensboro Regional Consortium, Inc. A signed Agreement included operating procedures, financial arrangements, distribution formula for surplus income, and responsibilities of the Consortium staff. This Agreement is updated each year by the Board of Directors of the Consortium.

During the first seven years of operation, the day sessions were held on the Greensboro College campus, while the evening session was continued two blocks away at Guilford's Downtown Campus. The Summer School Director supervised both operations as one program, with duplication of personnel. This continued to be cumbersome and expensive, although operations were financially successful. During these years, Guilford developed a good program of summer conferences which greatly assisted the financial stability of the college.

In 1973 Guilford sold the Downtown Campus and moved the total program to the residential campus. During 1977, it was deemed more practical to move all operations to the Guilford campus. This was a good move since the entire program is now on one campus, with fewer persons responsible for the operation. The same classrooms used during the day are now used for evening classes, with students able to choose whether they will attend at night or during the day or a combination of both. The curriculum is more varied, with less duplication of evening and day classes. It is seldom necessary to operate classes with fewer than ten students. Guilford has continued its program of summer conferences, while Greensboro can give more attention to building this type of income. Bennett's participation has been limited, with very few students attending the joint Summer School; however, Bennett has benefitted financially since each school shares in the income from visiting students.

3.2 Relation to Institutional Objectives:

Explained in 3.1.

3.3 Could this program be offered if the Consortium did not exist?

No, the entire operation is dependent on three institutions and is administered through the Consortium Central Office.

D. PROGRAM USE

4.1 Program Enrollment:

Summer School enrollment has been fairly consistent through 1975 but with inflation and increased costs, it is the general belief that more students now work during the summer in order to continue in school during the regular academic year. The gradual drop in enrollment at Bennett and Greensboro from 1970-75 probably influenced summer school enrollment somewhat. The number of visiting students was very large from 1969 through 1975 with about one-half of these students being public school teachers seeking certification in the several areas of Special Education. Tuition and often stipends to these students were paid by the State of North Carolina through the State Board of Education. The State lately decided to grant less funds since there are sufficient certified teachers.

Table I is to be used for enrollment data as well as financial data.

4.2 Enrollment Capacity:

The program could accommodate up to 1,000 students.

E. PERSONNEL

5.1 Faculty:

Faculty are employed from the faculties of the institutions. Administration is handled by the Consortium Executive Director and one secretary; financial records are maintained by the Business Office at Guilford College.

F. MEASURES OF PROGRAM STRENGTH

6.1 Accreditation Status:

Degrees are not granted by the Summer School, although courses taken during the summer may count toward degrees from the student's home institution. Standards for summer courses are the same as for courses offered during the regular school year.

6.2 Certification:

Courses taught during the summer are applicable toward certification in designated areas where certification is required.

6.4 Other Measures of Program Strength:

The summer session is evaluated by the Coordinating Council, to which it is responsible. This group each year makes suggestions for improvement and growth. The Summer School is also included in accrediting review by the Southern Association and the North Carolina Department of Public Instruction.

G. FINANCIAL

Since 1969, tuition has increased from $32 per semester hour to $50. Room and board has increased accordingly, while faculty salaries have been increased from $750 per three-hour course for all professional levels, to $1,100-$1,400 per course, depending on academic rank. Through careful budgeting, monitoring the size of classes and the number of courses offered, the summer programs have been able to operate with a sizeable balance which has been distributed to the three schools each year as income. Approximately $5,000 is maintained "on hand" to cover operating expenses during the year.

As mentioned earlier, enrollments were good prior to 1969 but the operational aspects of separate small summer schools were not financially feasible and in today's market it would be nearly impossible to operate separate facilities. In 1968, the last year in which separate summer schools were operated, Guilford had an enrollment of 515 students, with an income of $51,000 and faculty salaries of $48,000. Greensboro College enrolled 380 students, including 71 State interns (public school teachers), with an income of $44,125 and faculty salaries of $36,000.

In 1968, each college was losing money or only breaking even. Every year since the joint Summer School began, the operation has produced income in excess of expenditures. This surplus is distributed to the institutions according to a formula stipulated in the Summer School's Agreement. A report is made by the Consortium Director at the end of each summer session detailing expenses plus listing the amounts paid to each institution. Since the beginning of the operation ten years ago, $759,679.29 has been distributed to the institutions in cash payments. A summary of this income (non-existent prior to the consortium arrangement) is attached. (See Table I)

H. SUMMARY

The Summer School operated by the Greensboro Regional Consortium is quite different from most cooperative arrangements: it involves all disciplines and all faculty, rather than a single or small number of disciplines and a few faculty members. It was initiated in order to offer quality classes in the summer on an economically sound basis. It has made a profit every year (Table I) and anticipates a profit of approximately $80,000 this summer (see Table II). Profits are divided among the institutions according to an agreed upon formula. The institutions are highly pleased with this cooperative program.

Data for this study were furnished by the executive director of the Consortium. The data are clear and well documented, all financial reports are inspected by the Coordinating Council, and all records are a part of the audit procedure at Guilford College.

Although this program clearly meets institutional academic goals, for the purpose of this study, it can be categorized as an income producing cooperative program.

Table I

GREENSBORO REGIONAL CONSORTIUM, INC.

Summary of Joint Summer School

	Enrollment	No. Courses Offered	Income	Expense	Surplus Distributed to Colleges as Income
1969	912	105	$193,157.00	$138,668.42	$50,000.00
1970	973	110	174,174.95	129,105.13	45,069.82
1971	1054	112	205,999.00	141,192.41	64,806.00
1972	979	115	187,616.99	132,965.79	52,396.03
1973	990	108	235,892.75	144,910.55	87,527.00
1974	894	122	214,089.00	146,389.04	66,766.96
1975	987	115	273,352.56*	141,497.85	131,580.71
1976	803	95	223,097.60	146,337.44**	76,009.16
1977	740	86	234,300.44	143,810.20	87,440.24
1978	712	71	226,668.03	126,459.66	98,083.37
				Total	$759,679.29

VII 75

*Tuition increased from $40.00 to $44.00 cr. hr.
**Loss on dining room operation

WJL/ug
March 27, 1979

Table II

Greensboro Regional Consortium, Inc.
Summer School Budget
1979

Income:		
Tuition (based on 3900 student hours @$50.00)		$195,000.00
(based on 15 student hours music @$100.00)		1,500.00
Application Fees (650 @$10.00)		6,500.00
Student Activity Fees @$2.00/term		150.00
Student Teaching Fees @$60.00		150.00
Laboratory Fees		650.00
Room and Board (32/term @$50.00/wk.)		16,000.00
Seminar Travel		2,000.00
	Total	$221,950.00
Expenditures:		
Application Fees (to Guilford)		$ 6,500.00
Audit (1978 fiscal year)		1,000.00
Equipment and Repairs		300.00
Instruction (including 8% fringe benefits)		90,000.00
Insurance (liability)		180.00
Instructional Materials		3,500.00
Janitorial and Maintenance (to Guilford)		18,000.00
Memberships		50.00
Office Supplies (administrative)		300.00
Promotional		3,800.00
Room and Board to Guilford		16,000.00
Student Activities		150.00
Student Teaching Supervision		150.00
Travel (supervision and off campus seminars)		2,000.00
	Total	$141,930.00
Anticipated Income:		$221,950.00
Anticipated Expenditures:		141,930.00
	Balance	$ 80,020.00

Approved: Approved at Annual Board of Directors Meeting
October 25, 1978

WL: 10/26/78

GREENSBORO REGIONAL CONSORTIUM, INC.
AGREEMENT FOR A JOINT SUMMER SCHOOL
1979

I. Participation

Bennett College, Greensboro College and Guilford College will operate a joint summer school through the Greensboro Regional Consortium during the summer of 1979. In 1979 the summer school shall be centered on the Guilford College campus and resident students shall be housed on the Guilford campus.

II. Administration

1. The Executive Director of the Consortium shall serve as the Director of Summer School, responsible to the Consortium Coordinating Council. The Director of the Summer School shall, with the advice and agreement of the Academic Deans, prepare a list of courses and faculty, prepare a budget and in general see that all necessary arrangements for the operation of the Summer School are made and carried out.

2. The Summer School Director shall determine which courses will be cancelled and make all financial arrangements for part-time teaching loads.

III. Faculty

1. The faculty of the Summer School shall be drawn from the faculties of the members of the Consortium whenever possible. When such members are not available, other properly qualified persons may be used.

2. For the summer of 1979 faculty members shall be paid salaries as follows: Salaries will be based upon faculty rank as of September 1, 1978; $1100 for Instructors and Graduate Students, $1200 for Assistant Professors, $1300 for Associate Professors and $1400 for Professors. These salaries are for 3 and 4 credit courses without laboratories. Salaries for 4 credit courses with laboratories will carry an additional $150. Salary for one credit courses will be $400. Classes with 7-9 students will pay $1000. All other classes will be

cancelled or negotiated with the faculty member by the Summer School Director. Summer school faculty will be provided a contract which shall be binding except in emergency situations.

3. Travel for teacher education supervision will be paid 15¢ per mile. Arrangements shall be agreed to in advance in writing by both the Director and the faculty member involved.

4. Individual instruction in music shall be a matter of arrangement, by the Director, with the faculty paid 80% of tuition fees for private lessons. Regular music courses will follow the above schedule. All teaching assignments will be through Consortium contracts.

5. No faculty member will be paid for independent study. In those cases where the Director makes arrangements to meet special student needs the rate of pay will be 80% of the tuition charged.

6. A teacher shall teach no more than two classes in the Summer School unless other teachers are not available.

IV. Students

1. All students at any of the Consortium schools shall be eligible to attend summer school unless prohibited by the home school for academic reasons. All other students may register as visiting students.

2. Credits earned by students from the Consortium shall be reported directly to the college in which they are regularly enrolled. Academic credits earned may be reported or transferred to any college at the student's request. Students not currently enrolled in a college shall receive a statement of work done and grade received.

3. The basic tuition charge in the summer of 1979 shall be $50.00 per credit hour. In addition, there will be an application fee of $10.00 for all applicants and, for all resident students an activities fee of $2.00. The cost of room and

board shall be $250.00 per 5-week session. Private music charges will be $100.00 per credit hour. Audits will Be $50.00 per course and laboratory fees $10.00 per course where applicable. Audits will not be permitted in studio art courses.

4. Guilford College will be responsible for employing a nurse on a part-time basis and a physician shall be on call.

5. Summer School resident students shall be subject to such social rules as may be established by Guilford College.

6. Guilford College will employ a resident counselor to be in charge of each dormitory used by the Summer School.

7. Students may not enroll for a total of more than eight semester hours per session or a total of 16 semester hours, including all summer terms.

8. Financial assistance or employment for students who need it shall be the responsibility of the student's home school, except for in-service teachers in the public schools as may be provided for through State funds.

9. The colleges of the Consortium may invite up to a total of 30 students to take part in a specific Summer Scholars Program for rising high school seniors. Such students shall be selected by a committee of the Consortium. They shall be exempt from tuition fees, however, they may enroll only in courses which have registered 10 paying students.

V. Business Arrangements

1. All collection of tuition, fees or other expenses shall be through the Business Office at Guilford College and deposited in the Consortium account except for students registered by the Guilford College-Urban Center. Guilford College may separately charge these students and maintain the accounts receivable from them. Before the end of the 1979 Consortium year, Guilford College is to remit all revenue from tuition and other charges less any refunds, bad debts,

payroll, fringe benefits, travel stipends, janitorial and maintenance, distribution, or other expenses as may be provided for elsewhere in the Agreement. Records of charges and accounts receivable do not have to be segregated from other Guilford College students for this accounting. Bad debts shall be considered to be any account receivable which has not shown any activity within the preceeding twelve months. Recovery of bad debts shall be reported as income for the fiscal year.

2. Application fees collected at Guilford shall be remitted to Guilford to cover administrative costs.

Expenses incurred by the employment of student assistants in the language and curriculum labs, and all expenses of office and instructional supplies used by faculty shall be charged to instructional materials.

3. All charges for room and board shall be remitted to the housing institution. In turn, all costs of residence hall supervision, nursing staff and post office assistance shall be charged to these funds.

4. The Director shall make a payroll including 8% for fringe benefits, to cover all faculty and staff involved in the summer school. He shall transfer funds to cover the payrolls at Bennett and Greensboro Colleges from funds collected for the day sessions. The payroll for Guilford College shall come from the funds collected for the Guilford College-Urban Center evening program. The Business Offices of the three colleges shall issue checks to pay for these services after making the customary deductions for tax withholding, social security and the employee's portion of any fringe benefits.

5. Allotment of Summer School Surplus.

(a) Definitions

(1) "Participating Colleges" shall be those who are parties to this

agreement for any given summer school.

(2) A student's college shall be the college to which his grades are to be reported. Students who have already received a baccalaureate degree will be counted as visiting students.

(3) Each college's proportion will be arrived at by dividing the total number of semester hours taken by students from all participating colleges into the total number of semester hours taken by students from the given college.

(b) The total surplus shall be divided into three amounts as follows:

(1) The first amount shall be for regular course tuition of students from the participating colleges only.

(2) The second amount shall be tuition income from private music students.

(3) The third amount shall be for tuition of visiting students.

(c) The first amount shall be divided among the participating colleges in proportion to the number of credit hours taken by the students of each school. (e.g. 1102 credit hours Greensboro College students, 3202 credit hours Guilford students, 102 credit hours Bennett students, visiting students 437 credit hours. Total credit hours equals 4844 of regular course work. Distribution percentages would be Bennett 2.1%, Greensboro College 22.8%,,Guilford 66.1% and visiting student 9%. This represents the percent due each college of the balance remaining after all direct expenses are paid.)

(d) Private music tuition income shall be computed by applying the percent derived from dividing total music tuition revenue by total tuition revenue, to the total balance for distribution. (e.g.

$$\frac{\text{music tuition } \$\ 5,225}{\text{total tuition revenue } \$199,685} = .026.$$ Music income is 2.6% of total

tuition income. Balance for distribution $66,766.96 x .026 = $1,735.94. This amount shall be divided in proportion to the credit hours of music taken by students of each school.)

(e) The third amount, tuition income from visiting students, shall be divided equally among the participating institutions. See example in 5 (c) where visiting students contributed 9% of regular tuition income.

Balance for distribution =	$66,766.96
Music income	1,735.94
Remaining balance	$65,031.02
	x .09
Visiting student distribution income	$ 5,852.80

This amount would be divided equally.

6. Any additional personnel who may be needed shall be employed by the Director, and paid from the Summer School budget.

7. Any application or receipt of Federal funds in the name of the Greensboro Regional Consortium is merely for the convenience of the participating institution and the Consortium has no authority over nor responsibility for these funds. No part of such grants shall be considered as being a part of this Agreement.

8. The Consortium shall adhere to an accrual method of accounting except that all gifts and grants shall be recorded only upon receipt.

9. A cash balance of not more than $5,000 shall be retained in the Consortium for possible future operations and contingencies. This balance may be retained by reducing participating colleges' distributions. All bills for summer school expenses shall be submitted for payment by September 15, 1979, thus enabling the closing of the books and distribution of funds by October 1, 1979.

VI. Library

1. The Guilford College Library shall be operated on a regular schedule of hours, agreed upon in consultation with the Summer School Director.

VII. Registration

1. (a) All applications shall be through the Guilford College Admissions office and forwarded to the Registrar on that campus.

   (b) Students enrolled at Guilford College-Urban Center will pre-register or register for Summer School in a seperate registration regardless of where their courses are taken. All visiting students will register through the day program.

2. Final grades shall be reported as specified above IV. 2.

VIII. This agreement including the attached budget and schedule of fees shall be bindin for the Summer of 1979 only, but may be renewed and modified annually thereafter by the mutual consent of the participating colleges.

Approved: Approved at the Annual Meeting
of the Board of Directors

October 25, 1978
William J. Lanier

Additional Cooperative Academic Programs

Project researchers and visitation teams have worked with a number of cooperative academic program models and activities which are proper subjects of this study of cost effective and cost beneficial cooperative efforts. In some cases, it is clear that the program has not become mature enough to provide data sufficient to satisfy the procedures and formats used in the evaluations of the more complete case studies treated earlier in this chapter. At other times during this initial research, programs have been examined which are so complex or of such an extended nature that the present methodology is not sufficient to provide the data usually required in the study.

In several cases, programs of these sorts are so representative of the value of interinstitutional academic program cooperation and of the variety of activities found among the successful consortia that they serve a purpose in this report as such illustrations. A selection of these cooperative programs is included here with the understanding that they are primary candidates for continued and more detailed study. Each is clearly cost effective and of significant value to the institutions involved. Given time for the generation of more mature data and (in some cases) the development of a more applicable methodology, each will provide a more specific case study.

Modern Foreign Language Centers: New Orleans Consortium

The concept of modern foreign language centers was implemented at the member institutions of the New Orleans Consortium at the beginning of the first semester of 1977-78. At that time, the center for French was located at St. Mary's Dominican College, the center for Spanish at Xavier University, and the center for Russian and German at Loyola University. With the establishment of these centers, all upper division courses offered in a respective language were the responsibility of the department and institution which house the center for that language.

Cooperation among the member institutions regarding foreign language offerings had begun as early as 1973 and included very limited use of cross-registration and some faculty sharing. The enrollment experiences in the modern foreign language programs at these institutions are similar to those found throughout higher education. The low enrollment, relatively high-cost courses restricted what might be a more efficient use of resources. More informal cooperation by way of cross-registration had begun to serve a good student population by the mid-seventies, but without a focusing of responsibility.

The language centers, having assigned specific responsibilities among the participating institutions, continue to serve a significant body of students and appear to offer a mechanism for the more efficient use of faculty and other resources. The faculties involved continue to negotiate and refine the formal agreements and protocols attached to the centers. The experience with these modern foreign language centers is too recent to provide more elaborate study.

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Unique Majors Program: New Orleans Consortium

The "Unique Majors Program" is another which can be seen to develop out of a well-established cross-registration effort (see modern foreign language centers, above). This formal agreement, made final in the Summer of 1978, allows a student to cross-register at a participating institution for an academic major. The program includes joint recognition of a listing of existing academic programs which are "unique" to the single campus in the consortium which offers them. The current listing of "unique majors" or major sequences open to cross-registration is included here as Illustration A.

Although the cooperative program is still new, one student has completed a degree in therapeutic art by means of this system. While a student at Loyola, the student took a major in therapeutic art at Xavier. This first student to take full advantage of the Unique Majors Program contracted for a major in therapeutic art at Xavier University while enrolled as a full time student at Loyola University (Fall, 1978). Although some courses had already been completed at Xavier, the formal contract covering the 1978-79 academic year called for 30 semester credits of work in the major at Xavier. The balance of credits taken by the student during the academic year were housed at Loyola, the home campus, as is required by the consortial agreement. The degree was awarded by Loyola in May, 1979. Additional data will be available in time. There appears to be wide institutional and faculty support for the program.

Perhaps the most important aspect of this cooperative effort and that which will be most cost effective involves curriculum planning, which is implicit here. The institutions have identified existing academic majors which are "unique" - that is, which are available on only one particular campus. As these sequences are available to all students in the consortium through cross-registration, there will be no new duplicate majors within the consortium. This makes possible the effective and efficient use of resources among the member institutions.

Interinstitutional Review of Existing Programs: West Central Wisconsin Consortium

In an effort which produced its final report in 1975, the member institutions of the West Central Wisconsin Consortium assumed regional responsibility for an audit and review of what had been identified as low enrollment, high cost graduate level degree programs. The review had been initiated on a statewide basis by the University of Wisconsin System Administration, and only in this consortium was the procedure accomplished through such detailed interinstitutional cooperation. Accepting the potential of cooperative program review, the consortium established criteria and procedures for the task. The summary of criteria, including cost, is included here in Illustration B.

The purpose of the audit and review was to determine which existing degree programs should receive continuing support, which might be consolidated, and which should be eliminated. All levels of the participating universities were involved in the gathering of data. The reviewing bodies included quality indicators, but in most cases the focus came to be the productivity of and the need for the programs.

The final report from the consortium, which was approved and implemented by the Wisconsin Board of Regents, recommended the phase-out of 38 graduate programs in 24 academic areas. Program cost data were gathered and studied as a part of the audit and review process, but these were not used at that time to compute the "savings" realized through program phase-out. The benefits obviously are there and deserve further study.

Cooperative Curriculum Planning: West Central Wisconsin Consortium

The extent of West Central Wisconsin Consortium's responsibility for regional review of existing and proposed academic programs is explained by the chart included here as Illustration C. Formal agreement within the consortium outlines the type and level of review required of various academic programs. These four universities are the only examples in the state and university system of such detailed and effective voluntary interinstitutional coordination. Any significant academic proposal must undergo regional review by the consortium and since these joint review activities have been implemented, no academic program has been initiated unless it has received the endorsement of the consortium.

Again, in this example, the effectiveness and benefits of such cooperative regional curriculum planning include cost advantages, but data have not been collected to show these advantages. In the review of proposed new programs, for example, significant attention is given to the questions of institutional mission and the possibility of unnecessary duplication of programs within the consortium. If a proposed program is not implemented because it fails to receive consortial endorsement, one of the benefits is that the cost of a potentially duplicative program is avoided. No method has been developed in this study to determine the extent of the benefits realized through avoiding the costs of an unnecessary program by not starting that program at all. Given such a method, this example of voluntary consortial program review will provide an interesting case study.

Cooperative Music Degree Programs: Greensboro Regional Consortium

An example of cost effective planning exists between two members of the Greensboro Regional Consortium. In 1971-72, both Greensboro College and Guilford College were expending large sums of money for relatively few students. At Greensboro College, one-fifth of the entire faculty (11 out of 55) was in the music department. The total direct cost per credit hour was calculated at $60.18. Although Guilford College cost per credit hour was less ($41.92), the college was dissatisfied with program quality. In 1975-76, total cost per credit hour at Guilford was $80.43, and there was only one student enrolled in the major. Guilford College abolished its music department and became a part of a cooperative program through the Consortium. A workshop was held in 1975 for all music faculty in which an analysis was made of all course offerings. Total curriculum was reviewed, and course descriptions rewritten. This work has led to more diversified course offerings and student reaction to increased quality has contributed to increased enrollments. Total cost per credit hour at Greensboro in 1976-77 was $80.34. No new faculty were needed at Greensboro to serve the Guilford students; in fact, some part-time faculty were released, one full-time person resigned and the position was not refilled. Therefore, even with inflation, costs did not increase. In 1978-79, Guilford College students took 58 music courses at Greensboro College.

Cooperative Fine Arts Activities: Five Colleges, Inc.

Three programs in the fine arts (always an expensive area) have begun at Five Colleges, Inc. and show promise in cost effectiveness as well as quality. These three areas are dance, theatre, and music. In each case, the program is too new for hard data to be established. A Five College Dance Department has been created. The purpose is to develop a department of superior quality from individual programs at each of the institutions. Each individual program is too small to increase the diversity and strength required. The new department must overcome obstacles of faculty allegiance to institutional units (in this case physical education, theatre, or music) and become a unified department. Such a process will not occur overnight, but the potential for a strong department is present with existing personnel. The potential for cost effectiveness is great because of the existent diversity. However, until the department becomes unified, resources will not be utilized completely, and potential for cost effectiveness will not be realized. The problems facing the department are not uncommon in building new cooperative arrangements. The program should provide enough data for a more complete study within the next three years.

The theatre faculties at Five Colleges have met regularly. The institutions have jointly sponsored a playwright's workshop and a design exhibit. Plans are now underway for a joint appointment in Theatre Voice/Speech. Guidelines are in place for such joint appointments at Five Colleges and, althouth the upcoming appointment will be funded externally, having the guidelines previously agreed to concerning search, appointment, salary payment, etc., will make future appointments relatively uncomplicated. Cost effectiveness can be determined by comparing costs of the total salary to the institution's share. The enrichment value formula should also be applied to this position, since service is rendered to numerous students who are not speech/theatre majors.

The music departments at Five Colleges cooperate in forming a consortium symphony (a program impossible at the individual colleges without the consortium) and in various other performance endeavors. They recently have made their first joint appointment, one in Early Music. As with theatre, guidelines are in place for the position and cost effectiveness can be calculated in the same manner. The Early Music appointment will serve a limited clientele directly; however, the enrichment value of this position will be significant to students, faculty, and the community served by this consortium. Within three years, reliable data will be available on enrollments and services which can be used in evaluating cost effectiveness.

Consortia and their members:

New Orleans Consortium

St. Mary's Dominican College
Loyola University
Xavier University

West Central Wisconsin Consortium

University of Wisconsin-Eau Claire
University of Wisconsin-La Crosse
University of Wisconsin-River Falls
University of Wisconsin-Stout

Greensboro Regional Consortium

Bennett College
Greensboro College
Guilford College

Five Colleges, Incorporated

Amherst College
Hampshire College
Mount Holyoke College
Smith College
University of Massachusetts/Amherst

ILLUSTRATION A

New Orleans Consortium

MAJOR SEQUENCES OPEN TO CROSS-REGISTRATION

(July, 1978)

I. AT LOYOLA

Classical Guitar **
Classical Studies
Classical Studies Education
Computer Science
Finance
General Business
German
German Education
Harp **
International Business
Jazz Studies **
Journalism
Liberal Studies (Evening)
Management
Music Therapy **
Piano Pedagogy **
Public Administration
Religious Studies
Russian

** Open to Xavier students only.

II. AT DOMINICAN

Corrections (Evening)
Cytotechnology
Deaf Education
Food and Nutrition
French
French Education
Merchandising
Respiratory Care
Secretary--Executive (4-year)
Vocational Home Economics
Vocational Home Economics Education

III. AT XAVIER

Art (B.F.A.)
Art Therapy
Spanish
Spanish Educ.

IV. AT LOYOLA AND XAVIER

Communications/ Mass Communications
Drama/Theatre Arts
Drama Education/ Theatre Arts Education
Economics
Philosophy
Physical Education
Physical Ed[illegible] Education
Physics
Political Sc[illegible]
Pre-Engineer[illegible]
Sociology
Speech Education

V. AT DOMINICAN AND XAVIER

Secretarial Administration
Speech Pathology
Speech Pathology Education

VI. AT DOMINICAN AND LOYOLA

Criminal Justice (Evening)

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ILLUSTRATION B

WEST CENTRAL WISCONSIN CONSORTIUM REGIONAL REVIEW CRITERIA

1. Relation to Institutional Mission

- Is the program clearly within the Institution's mission?
- Will the program add significantly to the capacity of the Institution to fulfill its mission?
- To what extent is the program central to the Institutional mission, and related Institutional Programs?
- To what extent does the program complement or supplement other programs?

2. Need

- What is the present and projected student demand?
- Are there alternative opportunities in the region which would satisfy present and projected demand?
- Will the program contribute to specified societal needs?

3. Cost

- What are current unit costs for the existing program?
- What are projected unit costs for the proposed new program?
- How do these costs compare with costs for programs with comparable objectives and similar curricula?
- If the program is continued or new, what incremental demands for educational resources will it generate (space, library, computing, supplies, faculty/staff)?
- What priority does this use of fund hold in relation to alternative uses?

4. Output

- For existing programs, what is the output of graduates as recorded for the past 3-5 years; what is the projected output for a similar time span?
- For new programs, what is the projected output for the next 5-year period? 10-year period?

5. Quality

- What is the existing, or projected, quality of the program in relation to comparable programs in the region or elsewhere?
- What effect would its creation, continuance, or termination have on comparable or related programs in the Institution? In the Region? In the State?

ILLUSTRATION C

WEST CENTRAL WISCONSIN CONSORTIUM

ACADEMIC PROGRAM CHANGES AND RELATED POLICIES: IS ACTION REQUIRED?

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Type of Proposal / Level	Establish or Alter Institutional Mission	Undergraduate Transfer Policy	Freshman Admissions Policy	Academic Calendars	Establish a New School/College	Elimination of School/College	Renaming an Existing School/College	Establish New Department	Elimination of Department	Renaming an Existing Department	Establish a New Degree	Elimination of Degrees	Changes in or Renaming of an Existing Degree	Establish New Major	Elimination of Majors	Changes in or Renaming an Existing Major	Establish New Centers or Institutes***	Eliminate Centers or Institutes***	Establish Certification Programs**	Application for Extramural Grants For Programs with New Curricular Implications (see GAPP #2 rev.)	Establish New Minor, Submajor, Option, Collateral, or Emphases	Renaming an Existing Minor Submajor, Option, Collateral, or Emphases	Changes in Degree Requirements	New & Unique Course Sequences (14 credits or more)	Drop Courses	Reassigning Credit Hrs/Course	Change an Existing Course	Establish New Course	Catalogue Changes*	Course Title Changes	Cross Listed Courses
Institutions	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Consortium (WCWC)	Y	N	N	N	IO	R	IO	IO	R	IO	Y	IO	Y	Y	IO	IO	IO	R	Y	N	Y	Y	Y	N	N	N	N	N	N	N	N
Central Administration	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	IO	Y	Y	Y	Y	IO	N	N	N	N	N	N	N	N
Board of Regents	Y	Y	Y	Y	Y	Y	IO	Y	IO	IO	Y	IO	IO	Y	IO	IO	IO	IO	IO	N	N	N	N	N	N	N	N	N	N	N	N

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* Not involving any of the action categories where WCWC, CA and the Regents are involved.

** Refers to graduate and undergraduate course configurations, not identified as degree programs, which are designed for submission to the Department of Public Instruction for approval. Recertification every four years requires regional review and Central Administration approval.

***The intent here is to identify new centers and institutes which may initially or ultimately depend in part or in full on state funds for monetary support. It is fully recognized that the diversity among existing Centers and Institutes, both in terms of purpose and scope of activity, is substantial and the need (if any) for review will vary from situation to situation.

Y	Yes
N	No
IO	Information Only (Such items may be given more extensive review as necessary.)
R	Record Only (Information should be submitted for the record but no action will be taken by the Consortium.)

CHAPTER VIII

SUMMARY OBSERVATIONS

The implementation of this project was achieved much in the same way at the national level that consortia operate locally to achieve the cooperative goals of their member institutions. The successful attainment of mission becomes possible through genuine, shared responsibility among paricipants at an operations level. In this national, educational project, the coordinating body was entirely dependent on the good will and voluntary participation of the subjects. No doubt only a few such endeavors could affirm a comparable level of involvement and contributed services. The report herein stands as testimony to the ability of consortia in CIL and their central organization to practice operationally the cooperative philosophy which they advocate.

With the decentralized approach used to conduct the project, the observations that emerged in each of the six program areas emerged independently. Yet, the correlations between the separate findings is striking.

While the project's central focus was on cost effectiveness of consortium programs, the different investigators employed varying analytical methods in each of the six program areas. The observations outlined below reflect a commonality of benefit derived from the many forms of cooperation and are seminal to consortium effectiveness.

Duplication. Cooperative activities can avoid costly and unnecessary duplication. The ability to provide greater services to learners by pooling resources rather than by attempting to meet the needs as perceived by individual institutions has been shown to be a much more efficient use of resources. In the past, when financial resources were readily available for higher education, the solution that usually was implemented to meet an identified need was to create another organizational structure or institution. The consortium offers an efficient and non-duplicative alternative as an answer to meeting future identified needs.

Quality. Institutions can increase the quality of their offerings and services through a cooperative arrangement. Interinstitutional agreements related to joint programs, cross-registrations, and library cooperation expand the educational opportunities and services for students at each participating institution. By creating additional options for students, the quality of their educational experience is increased. Furthermore, the opportunity to sample and utilize the curricula, faculty, and student services of other institutions or to create joint programs among them makes available quality learning experiences that otherwise would not be available to the students.

Diversity. In the same manner that cooperative arrangements can improve the quality of educational experiences for students, they also can expand the diversity and breadth of that experience. The quality is difficult to measure but the diversity of the educational experience is concrete.

Access. Interinstitutional cooperative arrangements have made it possible to substantially increase access to postsecondary education for a variety of populations. For example, geographically isolated or place-bound populations have been served by cooperative outreach programs, new learning centers, and common market colleges. Existing student populations at traditional colleges and universities have had access expanded through cooperative agreements related to joint programming and outreach programs, cross-registration, library cooperation, and student services. Some populations not adequately served by traditional higher education (for example, adults, minorities, women, handicapped and economically disadvantaged) have, in the last decade, been served by new cooperative structures.

Financial Advancement. Cooperative efforts have made it possible for individual institutions, as a part of a larger cooperative structure, to obtain grants which otherwise they might not have received. Institutions can often make a case for support collectively that they could not make individually. These would include institutions within a particular geographic region as well as institutions spread across the United States, but fullfilling a specific function. The cooperative fundraising activies make it possible for the cooperating institutions to provide better services for their students than they could without this type of funding.

Communication. The process of planning, establishing, and operating a cooperative arrangement has opened up new and creative channels of communication. Although the process of developing interinstitutional cooperation is not easy, faculty and adminsitrators have found the rewards to be substantial and gratifying. The opportunity for open dialogue with colleagues at different institutions develops new approaches to learning and provides important new services. Such communication and community initiatives have been a stimulant to interactions of increasing number and quality.

An Alternative System. The cooperative programs studied in this report reflect the educational needs and concerns of the institutions which comprise their memberships. What is different about consortia is that they are significantly different in structure from the usual institutional pattern. Consortia are a unique alternative educational structure. They are often the result of the necessity to achieve equally or fully together what would only be achieved with stress and difficulty alone -- if at all. As an alternative system, consortia do not replace existing structures, they supplement and enhance them in ways often not open to institutions internally. The potential in these configurations for cooperative programming is unlimited. Alternative structures can be used for fast action when timing for achievement is crucial, and they can be employed over long periods of time for sustained influence on institutional growth toward maturity.

Non-competitive. Among the most noteworthy characteristics of American higher education are its individuality and the autonomous nature of its institutions. Colleges and universities were founded to achieve specific objectives and in the past three decades, many if not most institutions have attempted to be all things to the students they served. However, most institutions of late have found themselves in competition with other institutions regionally for students and financial resources. Surprisingly, one solution to the intense competitiveness of the 1970s had been the creation of cooperative arrangements which reduce interinstitutional competition and increase cooperation. Thus, joint purchasing, joint library usage, and cross-registration, make it possible to attract and serve students that might not otherwise have been available to an individual institution within its own structure.

Control. Institutional interreliance makes it possible for participating institutions to control their destiny much more directly. When free enterprise, whether individual or institutional, operates without a sense for community in higher education, it means that institutions necessarily will compete for students and dollars. When a cooperative arrangement is developed, however, planning and open communication between or among institutions assist in minimizing laissez-faire competition. For consortia, such cooperation is non-bureaucratic because the participants are the clients and the decision makers; encumbering levels of red tape are avoided.

Efficiency. Interinstitutional cooperation, as a result of planning and open communication, can prevent needless duplication and inefficient competition. Post-secondary institutions in a given region or in a given academic area, regardless of where located, have in fact a monopoly on postsecondary education. The economic principles which apply to all large corporations apply equally as well to colleges and universities. However, since postsecondary institutions are non-profit, the regulations related to restraint of trade are not applicable. In fact, uncontrolled monopoly is just as inefficient and unproductive for higher education institutions as it is anywhere. The greatest efficiency and the greatest benefit for students is achieved when institutions concentrate on doing what they do best. When institutions can agree to cooperate by limiting their competition then the greatest efficiency can be achieved.

Leadership. For fifty years consortial work in American higher education has been evolving; in the last twenty years it has taken major strides ahead. The developed capacities of consortium professionals and of institutional staff and faculty in their own areas of work is now an invaluable resource as the nation moves to meet demands for the balance of this century. In the wealth of experience accumulating among this special brand of leaders called cooperators there is a developed understanding and capacity for effecting interreliance. The conceptions of cooperation, the perceptions of the processes used, and the skills needed to effect achievement are being employed more widely by increasing numbers of staff and faculy. Interinstitutional leadership is strengthened and given increased opportunity in its area. With a greater capacity to perform, the vision of doing greater service becomes clearer and more compelling.

In his book *Colleges in Consort*, Franklin Patterson concludes his study on the consortium movement with the following statement:

> "But it *could* be the threshold of a new era in an American mode of higher education that preserves and enlarges independence, diversity, and quality through intelligent interdependence. This depends almost wholly on what presidents and trustees and faculties do about it. And what *they* do, will depend almost wholly on what wise and forward-looking outsiders in government and philanthropy do, and how soon they act, if at all."

Now six years later the evidence in this cost effectiveness study details what many presidents and trustees and faculties have done and the benefits they are deriving. We hope this documentation will be an encouragement to outsiders in government and philanthropy now to strongly exercise their wisdom and vision in support of collegiate cooperation.

APPENDICES

Appendix A

PREFACE TO METHODOLOGY

In the academic year 1977-78, the Council for Interinstitutional Leadership (CIL) undertook a two-year project to study the cost-effectiveness of cooperative programs operated by voluntary consortia of colleges and universities, and to demonstrate the findings in various ways in order that the potential benefits of such programs would be more widely understood. The project is supported fully by the Carnegie Corporation of New York. The first of its purposes is to determine, through study of consortial operations, actual dollar savings that have accrued to specific colleges and universities from their cooperative programs, to record the increases in revenues realized from such programs, and to estimate, in value terms wherever possible, the other benefits that cooperative programs offer to students and faculties through giving them access to the resources of more than one college or university. The two other purposes of the CIL/Carnegie Project are to disseminate widely the findings from this research in the form of guidelines which might be followed by other consortia in strengthening cooperation, and to conduct a series of on-site assessment and implementation projects with consortia selected as representative of the nation's higher education consortia.

In the project's formative stages, which concentrated on the analysis and organization of cost data and the estimating of benefits in various consortial settings, it became evident that the theoretical base for this research was weaker than had been expected. A methodology and some guidelines were needed fairly soon. The persons most active in the study felt that the literature relevant to the study should be reviewed by someone thoroughly familiar with the financing of higher education who also had a background in economics and experience in the business management of the colleges and universities. Dr. Thomas O. James, then the Treasurer and Business Manager of Chatham College and also the Chairman of the Small Colleges Committee of the National Association of College and University Business Officers, consented to conduct the review. The CIL/Carnegie Project has benefitted immeasurably by his contribution, a revised draft of which is herewith disseminated for review.

Dr. James uses as a launching pad several studies and financial manuals prepared under auspices of the National Association of College and University Business Officers, the American Council on Education and The National Center for Higher Education Management Studies. Their studies and manuals were the results of large-scale research on cost analysis in higher education. The first half of Dr. James' monograph concentrates on the findings of those studies and manuals, and interprets them for purposes of cost analysis of consortial programs. As a result of this review, it
to the CIL/Carnegie Study and to consortia undertaking evaluations of their own programs are beset with difficulties. They are of at least three kinds.

First, cost analysis is not a well developed art in the management of colleges and universities as it is in the disciplines of economics and business administration and in the management of corporations. The cost analysis of a consortium's program is very much constrained by the cost data, costing systems, and cost analyses of the colleges and universities that comprise the consortium. Too frequently lacking is a sophistication of technique that is desirable if cost analysis is to serve as a highly valuable aid in decision making by officers and governing boards.

Second, the development of cost analyses and program evaluations in consortia is affected by the larger problems common to voluntary cooperative enterprises. Authority usually rests with a committee or other group, not with an individual. There are problems of scheduling and reaching consensus that hamper the forming of policy and the making of other decisions. The development of cost analysis thus requires a large element of negotiation among institutional professionals and the consortium director. In Dr. James' words, cost analysis in a consortium is a negotiated process.

Third, lack of compatability between the data of different institutions within a single cooperative program weakens the validity of interinstitutional comparisons and the credibility of the resulting program evaluations.

The last half of Dr. James' monograph is concerned with a methodology for cost analysis of consortium programs. Having found that the literature is devoid of research into this aspect of cost analysis in higher education, he has set the CIL/Carnegie Project on a path toward establishing such a methodology. In doing so, he has drawn from his extensive knowledge of NACUBO's work in establishing principles and standards for financial management, including cost analysis, and on his many years of experience as the chief business officer of a college with membership in a successful ten-institution consortium (The Pittsburgh Council on Higher Education). Ever mindful of the critical role of presidents, business officers, and other professionals in fostering the success of consortia he has shaped an outline of principles and procedures that calls for the participation of institutional officers and professional staff at various stages in the evaluation of cooperative programs. Cost analysis of these programs must reflect the cost information systems and cost data of the member institutions, and can be no better than their systems and data permit. A strength of his proposed methodology is that it conforms closely with methods, techniques and principles recommended by NACUBO that are in general use throughout higher education. The methodology, for example, recommends that the indirect costs of a program be included with its direct costs wherever the member institutions use this method of cost analysis, and that the cost analysis data be reconciled with the official financial statements of the member institutions and the consortium so that differences between the data in different reports are explained. Yet another strength of the methodology is its requirement that the cost analysis and evaluation be validated by appropriate officers of the member institutions.

What is proposed here is not a complete, final methodology. It is, however, a very substantial beginning that has permitted the CIL/Carnegie Project to proceed with some confidence toward the development of a methodology and guidelines for use by consortia directors. Dr. James has concentrated on the cost side of the analysis. The analysis of benefits is touched upon only briefly at the end of the draft.

Work on a methodology for benefits analysis is being developed in the CIL team visits to consortia. This is a participatory process involving officers and professionals of consortium institutions who are the leaders of their consortium programs. There has been a lively exchange of ideas and views about value concepts and measurement techniques at every team visit, without exception. The institutional officers and other professionals have a strong interest in their programs and in our attempts to measure costs and benefits. What is evolving on benefits analysis, then, is found in the reports from team visits. There is no single way of measuring benefits; on the contrary, different ways have been found in different team visits, and the concepts vary among different kinds of programs. The benefits of joint academic programs, the benefits of cross-registration, the benefits of library cooperation, the benefits of a cooperative financial aid program, the benefits of a joint admissions program, the benefits of cooperative purchasing—all differ from one another.

A synthesis of the work on benefits methodology is needed, and the reports flowing in from some dozen consortia visited in recent months should give a sufficient variety of concepts that the synthesis can be written by April. A Committee on Methodology and Guidelines is being appointed to take responsibility for developing the methodology. Its members will be Dr. James, now the Vice President of Birmingham Southern University; Dr. Webster C. Cash, Director of Institutional Research and Planning and the Chief Business Officer of the Atlanta University Center; Mr. Dean Tollefson, Executive Director of the Union of Independent Colleges of Art, and the CIL Board Chairman; and Dr. Lewis D. Patterson, Director of the CIL/Carnegie Project.

A well-conceived methodology would not, however, be very useful if it stood alone. Management theory and concepts, if they are to be understood and used by administrators, must be transformed into procedures that administrators find easy to understand and feasible to apply in their work. A major job in the coming year will be the preparation of a procedures manual that will give a comprehensive set of guidelines for consortia to evaluate cooperative programs. Its preparation will require a concentrated effort, perhaps the full time of one person for six to twelve weeks to write the first draft. It will then require time by the committee members to reshape the draft, and further time for further review by others.

Meanwhile we have at hand this draft which, with earlier drafts, is a valuable aid to the visiting teams and the contributing authors who are writing the results of the team findings and their individual research efforts in the project. On behalf of the CIL Board of Directors, I wish to thank Dr. James and the other persons who have made possible the successes to date of this interesting, pioneering work.

Lewis D. Patterson
Executive Director
The Council for Interinstitutional Leadership

October 1979

Appendix B

TOWARD A METHODOLOGY FOR ANALYZING COSTS
OF
INTERINSTITUTIONAL COOPERATION

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TOWARD A METHODOLOGY OF COST ANALYSIS
for
INTERINSTITUTIONAL COOPERATION

A review of the literature reveals that there is no universally accepted technique for cost analysis in higher education, nor indeed are any of the techniques or methods of cost analysis from managerial economics in widespread use in higher education. Cost analysis is not a highly developed art in higher education as it is in the corporate world or in the academic disciplines of economics and business administration. The vast majority of institutions of higher education use the records of their costs in recent years - their historical costs - as the basis of their cost analysis system. Many of them include average costs in their use of historical costs, but the technique for determining average costs varies widely from institution to institution. Moreover, even among those institutions which use average costs, data between institutions are seldom compared because the reorganization of data to achieve comparability requires great effort and the results are viewed with skepticism.

On the basis of these findings, it is evident that the only methods available to consortium directors for determing the cost effectiveness of their programs must be simple methods which rely on the use of whatever historical data are available at the member institutions and in the financial records of their cooperative programs. These will usually include one or more among the following kinds of cost information:

1. The direct costs of programs - those which have been budgeted directly to the programs;

2. The total costs of programs, which combine the direct costs of a program with some indirect costs that must be estimated because they cannot be readily identified as the costs of a particular program but are shared among programs;

3. Average costs which are unit costs.

To have historical data at hand is not enough. To the extent that cost effectiveness weighs in the decision-making process, the consortium director needs to have available a systematic approach for the analysis of those costs. Where adequate cost data may not be available or may not be fully defensible, a modified technique for arriving at cost data may be necessary. The purpose of this study is to stimulate thinking toward the development of a methodology for analyzing the costs of cooperative programs operated within a consortium of colleges and universities.

A. Limitations on Developing a Methodology

One of the early and more important findings has been that decisions on cost effectiveness at the consortium level are being made with as much or as little data and methodology as are most decisions in higher education. Consortia directors have the added problem, however, that they may be trying to gather and analyze cost data from institutions which have no common data base. The lack of comparable data is not the fault of the consortium but is a fact of life in higher education. When institutions of higher education develop data bases that are comparable and comprehensive, cost analyses of consortium projects will become easier to prepare, will be presented more clearly, and will be more reliable.

The methodology proposed here accepts these limitations as inherent. It attempts to develop an understanding among consortium directors and their clients on what can and what cannot be achieved in the field of cost analysis. The methodology purposely is elementary. The analyses that will be developed with its use may lack sophistication and may be vulnerable to criticism. Their simplicity and vulnerability, however, are embedded in the practices of higher education. The methodology should be refined and improved with experience. As institutional cost analyses become more sophisticated, so will the cost analyses of consortium programs.

It is hoped that the simple yet flexible methodology prepared here will be helpful to consortia and institutional personnel in developing cost effective skills. So far as is known, it is apparently the only such methodology currently available. It is hoped that this finding will help demonstrate the need for further advances in the art of cost analysis in higher education.

B. NACUBO Standards of Costing

The National Association of College and University Business Officers has recommended twelve standards against which cost analysis techniques should be judged. Business officers are familiar with these standards. They have been widely adopted and are generally used. We recommend that these standards be used in judging the quality of data and analysis in cost estimates made for interinstitutional cooperative programs.

1. The purposes for which cost information are to be used should determine the framework within which cost information is developed.

   Costs are determined to satisfy specific purposes for which cost information is needed. A clear definition of these purposes is needed in order to specify the approach to be used to determine costs.

2. Cost information should be based on the accrual method of accounting.

   Two methods of determining cost are the cash basis method and the accrual basis method. The cash basis method of accounting recognizes expenditures when materials are used and services are performed. To provide valid and consistent cost, the accrual method of accounting should be used, applying the concept of materiality.

3. Cost data should be reconcilable to official financial accounting data.

   Reconciliation with official financial records is necessary in order to insure the validity of cost records. (Reconciliation is the process of identifying and giving appropriate consideration to differences in two or more sets of data.)

4. Non-financial data should be reconcilable to official institutional records.

   Reconciliation of non-financial data to the official records of the institution is necessary to insure the validity of cost data when such non-financial data are used in the cost determination process.

5. Definitions used in cost determinations should be applied uniformly.

   Uniform definitions should be employed during the cost determination process and from period to period to achieve comparable cost information.

6. Cost information and related costing units should cover the same period.

   Cost determining for a particular period should be related to the units of service provided during that same period.

7. Cost information should be consistently determined.

   Cost information used in any cost study must be consistently determined for all periods included and for all organizational units included. Cost data will not be comparable unless consistently determined. Consistency depends on uniform definitions, methods, and interpretations as well as judgments exercised in the cost determination process.

8. Cost should be attributed to a cost objective based on a causal or beneficial relationship.

   Meaningful and dependable cost determinations require that costs be assigned to cost objectives according to identifiable relationships that logically and reasonably cause the cost to occur or that result in benefits received by the cost objectives.

9. Indirect cost should be allocated based on quantitative measures that can be applied in a practical manner.

   The bases of allocation of indirect cost should involve the use of those quantitative measures which best represent the relationship of cost to the cost objective, with the result that indirect costs are equitably distributed. There are instances when the most equitable distribution may not be the most practical, both in terms of time and related expense involved in collecting and tabulating quantitative measures. In such cases, the most practical measure should be selected, provided the results are not materially different.

10. Common cost incurred to provide two or more services should be allocated in an equitable manner.

    Allocation of common costs to joint services, which are cost objectives, should be based on the logical relationship of the several services to one another and to the nature of circumstances of the costs incurred. It should be recognized that separate costing of jointly produced services is subjective and the basis available to allocate joint costs is arbitrary.

11. Capital cost of a cost objective should reflect the applicable expired cost period.

    Cost of a cost objective should reflect applicable expired cost determined on the basis of the estimated useful life of the asset being depreciated.

12. Cost information should be accompanied by a disclosure statement.

    Explanatory disclosures necessary to provide the user with a clear understanding of the previously established, intended use of cost information should accompany the reporting of such information. Disclosures should encompass the costing method and approach used, the cost definition used, the types of cost included, identification of cost objectives and costing units, and other information pertinent to the cost determination effort.

C. NACUBO-NCHEMS Costing Methods

To estimate, in dollar amounts, how cost effective cooperative programs are requires a methodology. For guidance in selecting such a methodology, the Technical Report 65, "Procedures for Determining Historical Costs," prepared jointly by NACUBO and the National Center for Higher Education Management Systems (NCHEMS) has been helpful. This pioneering effort was written to develop the costing components of the NCHEMS information exchange procedures so that institutions might prepare and organize cost data for comparative purposes. The aim of that project has been to permit an institution to compare the costs of a particular program with the costs of comparable programs at other colleges and universities. Technical Report 65 recommends the use of three basic methods for cost analysis: the full costing method, the variable costing method, and the standard costing method.

Full costing is defined as the accumulation of all direct and all indirect costs attributed to units of service. Direct costs are those which can be budgeted and reported as the cost of a particular program or other activity. Indirect costs are those costs that are not budgeted or recorded in the accounting records as a part of the program's costs but have been incurred in support of that program, as well as other programs. Examples of indirect costs are expenditures on the operation and maintenance of facilities where the facilities are shared jointly by several programs, and the cost of administrative support services, such as the business office. The full-cost method (direct plus indirect costs) is recommended for use in measuring the cost of

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cooperative administrative projects such as joint purchasing. It is the simplest of the three methods. It is also one which can easily become more sophisticated and more accurate as data bases are developed. As the NCHEMS report notes, however, costing at colleges and universities often is not carried beyond the level of direct cost. Where this is so - where indirect costs are not available - the full-cost method cannot be used.

The variable costing approach, according to the NCHEMS report, recognized "(1) those costs that are variable, that is, costs that change when changes occur in service volume or mix, and (2) those costs that remain constant regardless of the number of units of service provided, which are referred to as fixed costs." (Technical Report 65, page 1.5) The variable costing method, which can include marginal or incremental costing techniques, is not recommended for consortium cost analysis because it is not yet widely used in higher education.

Still another approach is the method of marginal costs that is a cornerstone in economic principles and is widely used in the cost analysis and planning of large corporations. The American Council on Education, in a recent publication on cost analysis in higher education, reported that, through the year, issues of marginal costing, responsibility accounting, and managerial cost accounting have been virtually ignored. (The American Council on Education, "A Study of Cost Analysis in Higher Education, Vol. I, The Literature of Cost and Cost Analysis in Higher Education.") NACUBO supports the development of marginal costing for higher education, and marginal costing well may be the wave of the future in cost analysis. It cannot, however, be a method adopted for use in the CIL/Carnegie Project because it rarely is used by colleges and universities today. As it becomes more widely used, consortium directors will increasingly use it.

Standard costs are defined by NCHEMS as predetermined unit costs. Use of the standard cost method requires that there be norms or averages or some other representative costs with which a set of activities or products can be compared. Although a costing method often used in industry is to compare actual costs with standard costs, the American Council on Education reports that "standard costs have been used in higher education primarily to establish prices for goods and services transferred from one organizational unit of an institution to another." (Ibid., page 1.7). This approach, where used in consortium institutions, can be used for costing such consortium programs as cross-registration or faculty exchange - any academic programs or student service programs for which accounting information does not give a clear basis for estimating the benefits of the program.

D. The Limited Use of Cost Analysis Techniques in Higher Education

There are, then, standards and costing methods available for use in higher education. But are they being used? For an answer to this question, which is important to the CIL/Carnegie Study, reference is made again to the ACE Report. A summary statement of its findings on the question leaves no room for doubt (Ibid., Vol. 1, pages 10-11, and Vol. 2, pages 125-27):

- Generally, the literature of cost analysis in higher education is predominately informal and fragmented.

- The number of journals which publish articles on cost analysis in higher education is not large. Very few journals specialize even in higher education administration. The audiences of the journals tend to be in only one or two of the following categories: faculty, academic administrators, business officers, and technologists interested in applications in the area of education. It is difficult to reach administrators of higher education because of the limited and diverse nature of the avenues of publication.

- There is a logical, mutually supportive relationship between the literature of the field and the educational programs for training in that field. Few academic administrators, institutional research officers, or business officers are trained in a setting where technology is applied to higher education. Lack of academic program activity in higher education administration (specifically, cost analysis) is related to problems with literature.

- Communications of current developments in costing are inadequate. Certainly the scholarly discussion of the pros and cons of new proposals is nonexistent.

- During the last forty to fifty years the literature has shown an amazing lack of awareness of the historical development of cost analysis.

- The literature of the late 1960s and early 1970s reflects an emphasis on technology. Issues in technique predominate.

- The pre-1965 literature is largely a development of aggregate level accountability information by persons with institutional backgrounds. Post-1965 literature is largely oriented toward efficiency and is contributed by persons without strong institutional backgrounds.

- The literature contains very little discussion of the use and utility of cost analysis. The role of costing information and decision-making has not been addressed.

- There has been very little reporting of empirical studies or of actual successes and failures in application.

- The literature has not provided the basis for classifying the differences in integral institutional information needs as opposed to external information needs of persons or agencies.

- There is very little use of cost analysis in the areas of cost-recovery-rate setting and tuition setting.

- Cost is not a dominant consideration in most allocation decisions. Program completeness, program quality, institutional priorities, and interpersonal relations frequently are more important than costs.

- Cost related data (class size, faculty workload, student/faculty ratios, and a faculty salary rate) are preferred to unit cost data in supporting allocation decisions.

- There is a general lack of interest among institutions in managerial cost accounting.

- Most institutions do not believe that technical problems can be handled adequately by using instructional unit cost data for appropriate decisions.

- Institutions support the concept of data exchange. They prefer the exchange of cost related data to exchanging unit costs and they favor selection of peer institutions for comparison rather than the use of broad categories.

- Most institutions assessed the NCHEMS information exchange program as inadequate for meaningfulness. Major research universities were particularly critical in their evaluation.

The final summary of this important work had a startling and, for purposes of the CIL/Carnegie Project, very important conclusion:

> Our attempts to obtain a picture of the future use of cost information in higher education were both frustrating and rewarding. The literature that formally addresses future use is somewhere between sparse and non-existent. Still a review of the literature indicated that the use of analytic techniques should be increasing greatly, standardization of reporting will be a source of controversy, outcomes measurement will become increasingly important, no major breakthroughs in the technical areas of joint costs, marginal costs, and standardization of costs is expected, and there will be increasing emphasis on issues of cost system implementation.

The importance of this conclusion to the directors of consortia and to the CIL/Carnegie Project is the finding that, for purposes of cost analysis of consortium programs, the data that are available must be used without sophisticated costing systems or costing techniques, both today and in the near future.

E. The Lack of Costing Methods for Interinstitutional Comparisons

In the CIL/Carnegie Project, the combining of cost data from two or more institutions poses a difficulty that has been identified within a different context by NACUBO, NCHEMS, and researchers developing comparative cost analysis in higher education. Their concerns are that the validity of interinstitutional comparisons and analyses is weakened or lost entirely because of differences among colleges and universities in their costing systems, but that this difficulty is not adequately recognized in evaluations and in decision-making on resource allocation. The context under discussion in this literature is the use of comparative data by institutional administrations and external agencies such as the federal departments and agencies awarding grants and state coordinating boards. Within the context of the CIL/Carnegie Project and the use of data by consortium directors for evaluations, the same difficulties apply.

NACUBO calls for an attempt to eliminate cost determination differences which result from costing procedures that are not uniformly applied. It cites as typical examples of methodological differences:

1. The judgments exercised in collecting, estimating, and allocating costs differ since they often depend on the interpretation of complex situations and on the unique characteristics of individual institutions. For instance, experience has indicated that there are no generally accepted bases suitable for all allocations of indirect cost.

2. The definition of direct and indirect costs can be different from institution to institution depending on the ability of an institution to identify costs as direct.

3. The methods used to accumulate and analyze costs may differ from institution to institution (NACUBO, opus. cit. 4:5, page 13).

When methodological differences are eliminated or minimized, the resulting differences between comparative data may be interpreted as functional differences. According to NACUBO, functional differences principally result from the differences between institutions in programs and related support activities. Identifying the cause of such differences requires an analysis of the characteristics and content of programs, with attention to the following:

1. Missions, goals, and objectives differ among institutions.

2. Quality and efficiency of the educational process differ among institutions.

3. Organizational structure, activities, and units of service costs differ from institution to institution.

4. Constituents served by institutions have different needs and, therefore, require different education services.

5. Different geographical locations of institutions cause cost differences.

6. Distinct differences exist between those institutions which are well established and those which are developing.

7. Economies of scale may be available to a large institution and not to a smaller one.

8. Variations in costs occur because of differences in the availability of funds.

The concern in these passages is how cost information will be and should be used, both internally by management and externally by government agencies. NACUBO asks, "Can adequate analysis of the relationship of differences in cost to functional differences be developed to permit valid and equitable decisions?...Much study is required to prove the utility of interinstitutional cost information." (Ibid., 4:5, pages 13-14).

This analysis refers to the cost information available to state and other controlling agencies, but consortia prosper or suffer in their attempts at cost analysis in exactly the same way. In view of these statements can there be any doubt about why consortium directors have difficulty in demonstrating the cost effectiveness of their programs and projects?

Where does the literature leave the CIL/Carnegie project in its search for a methodology? The answer is: right back on square one. One important thing is learned from the literature. No one in higher education should tell consortium directors that whatever methodology they choose is right or wrong. If there is a better methodology than the one they have selected, that must be demonstrated, not asserted.

F. Criteria of a Successful Methodology for Consortia Cost Analysis

Because of the logical recommendation that consortium directors use whatever data are available and that their methodology be as simple as the costing methods used by their member institutions, a burden is placed upon the institutions. Will the resulting analysis be valid? It will be if in the selection of a methodology the following criteria are used.

1. Simplicity

   The method must be simple to use and easy to understand.

2. Utility

   Consortium directors, officers, and staff of the member institutions of the consortium, and specialists in cost analysis, must be able to use the costing method in decision-making processes.

3. Availability of data

   The cost analysis method must be based on data that are easily obtained.

4. Applicability

   The cost analysis method must be applicable to similar projects in other consortia.

5. Replication

   The cost analysis method must permit projects of proved cost effectiveness in one consortium to be successfully replicated in other consortia.

6. Defense

The cost analysis method must be clear and sufficiently comprehensive so that criticism by costing experts can be answered.

7. Evaluation

The method must have utility in analyzing the costs of different kinds of consortium programs.

8. Priority-setting potential

The cost analysis methods used for different programs of a single consortium must allow for the rank ordering of projects according to the priority of their cost effectiveness or their contribution to institutional goals and objectives.

G. Selection of a Methodology for Evaluating Consortia Cost Effectiveness

Because there are numerous reasons for conducting cost analyses, the method that is selected for any particular cost analysis must be suited and perhaps also adapted to the purpose at hand. Each method has strengths and weaknesses for a particular type of program and problem. The weaknesses are greater when a method is applied to types for which it was not intended.

For the CIL/Carnegie Study, it is recommended that cooperative projects be classified into three types according to the purpose of the cost analysis.

Type A. Predominately administrative or managerial projects such as joint purchasing.

Type B. Predominately academic projects, such as cross-registration.

Type C. Projects which have both administrative and academic elements, such as cooperative library projects or joint academic appointment projects.

Wherever possible, in the analysis of administrative projects (Type A), full costs should be used. The full costing technique will build upon the data available at a consortium's member institutions, including direct and indirect cost data. It will be as sophisticated or as simple as the data systems of those institutions.

Wherever possible, for academic projects (Type B), average-full costs should be used. Average-full costs for a program such as cross-registration may not be available, but they can be developed quite simply.

Wherever possible, for administrative/academic projects (Type C), either full costs or average-full costs, or both in some combination should be used.

In selecting a methodology and developing cost analyses, it is most important that the methods and analyses be negotiated with the officers of the member institutions. Understanding and goodwill are required of all concerned. The key to success in such efforts and, indeed, in consortia themselves, is commitment. If the commitment is lacking, the costing effort and the cooperative programs themselves are vulnerable and can easily be attacked. Criticisms can be made, not because the projects are unworthy enterprises, but because the costing techniques for analysis of the data are not available or sophisticated enough to demonstrate the true value of the consortium's programs.

These methods have several virtues, both for the CIL/Carnegie Study and for consortium directors when evaluating their programs. The methods are simple; yet they can be made more sophisticated if a program requires sophistication and if the required information is available. They are easy to understand. They allow for the fact that the data available for cost analysis of a consortium program may be thin, but acceptable. Because they are simple, they are widely applicable and replicable. Because they are based on the reality of the state of the art of cost analysis in higher education, they are defensible. They permit the resulting cost analyses to be evaluated within a system of consortium evaluations because methods that are simple, widely applicable, and replicable permit ease of evaluation.

Correct methodology is necessary but is not sufficient. Whether the cost analysis of a consortium's programs will meet the NACUBO costing standards will depend on whether or not the data made available by the consortium and its member institutions meet the NACUBO standards. It is hoped that more and more institutions of higher education will adopt the NACUBO costing standards and that the general level of cost analysis will rise in the future. As it does rise, the potential for excellence in the consortium projects will grow.

NACUBO's College and University Business Administration is the only resource which gives a complete approach to selecting a cost analysis methodology for the evaluation of a specific program. Because of its importance for the CIL/Carnegie Project, the relevant section of the NACUBO manual is reproduced in its entirety in an appendix. The outline below, which is based on that section, gives the requirements for establishing a methodology (Ibid., 4:5, pages 3-8).

1. Purpose of cost information

   The purpose of collecting and analyzing cost information on consortium programs is for the consortia's governing board to be able to evaluate the programs.

2. Definition of cost

   Three types of cost are defined by NACUBO: financial accounting or expense costs, cost accounting or unit costs, and micro-macro costs which can be expired, replacement, projected, or imputed costs. Consortium directors must use the data from the cost systems of their member institutions. Consortial needs for an information system of a different type will not usually influence decisions on the institutional development of information systems. Hence, the selection of

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cost systems is predetermined for the consortium by its member institutions. Moreover, the selection and presentation of a cost definition often lacks clarity which further compounds the difficulties of defining a cost system.

3. Cost objectives

This is the organization unit, project, program, or other frame for which the costs are to be accumulated. It is important that the nature and characteristics of the objective be included in a project description.

4. Costing units

Costing units are the activities or outputs of the cost objectives such as student credit hours. They should be identified or defined in the program description and in the cost analysis. For programs such as cross-registration, their identification or definition is vital.

5. Types of costs

Five types of costs are identified by NACUBO: historical, projected, standard, replacement (program, not capital), and imputed. In the cost analysis of consortium programs, selecting a type is unnecessary since the type of costs used at consortium institutions sets constraints on the data and analysis.

6. Classification of cost

NACUBO classifies costs as (a) direct and indirect costs, and (b) fixed, variable, and semi-variable costs. Knowledge of the classes of data available at the member institutions is important to the consortium director. If, for example, indirect or fixed-variable costs are available at all of the member institutions, the director will have access to better information for developing a cost analysis. If, on the other hand, neither indirect costs nor fixed-variable costs are available, the director and a consortium governing board must accept a lower level of sophistication in the analysis.

While full costs are preferable to direct costs for most purposes, their use involves a risk because they can be used as a weapon against programs or ideas being proposed. If every new program were expected to cover all possible direct and indirect costs, the number of new programs approved would be fewer. Yet, good cost analysis will help demonstrate the benefits of cooperative programs. It may, for example, show how additional funds will become available for cooperative programs that would otherwise not be available. The best defense against the negative arguments that may accompany full-cost analysis is a minimal understanding of marginal cost and fixed and variable cost concepts by the consortium director and the consortium's governing board.

7. Reconciliation of cost analysis data and financial accounting

To insure the validity of cost information, the data used in cost analyses should be reconciled with the accounting system reports. As defined by NACUBO, reconciliation is the process of identifying and giving appropriate consideration to differences in two or more sets of data: cost information,

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and official financial and statistical information. "This reconciliation is necessary because cost accounting systems or special cost studies normally make some use of the following:

a. Costs appearing in different form from that contained in the financial accounting;

b. Costs unavailable in the financial system;

c. Statistical data available elsewhere in the institutions or from other sources.

The reconciliation of these items is necessary to insure the validity of cost information. As is true with the presentation of financial statements, cost information reports should be accompanied by a disclosure statement sufficient to provide the reader with the significant costing standards and policies affecting the determination of the cost information for its intended purpose," (Ibid., pp. 7-8).

It is recommended that program evaluations and proposals include statements of reconciliation. Decision-making bodies need such statements if they are to have confidence in the data and in the evaluation of a program. When provision of a reconciliation statement is beyond the capability of a consortium director, questions about the validity of the cost data should be discussed. The discussion will not enhance the validity of the data, but an understanding of the level of validity should enhance the credibility of the consortium director and the credibility of the results.

8. Cost determination methods

   Two types of cost determination methods are presented by NACUBO: the specific service or project method, and the continuous service method. Many consortium projects can be accommodated by this specific service method; they are not continuous in the same sense as institutional operations. Here, too, the method is predetermined by the data system of the consortium institutions.

9. Cost approach and cost analysis

   Full costing, variable costing, and standard costing are the three approaches given by NACUBO. For this project, as reviewed above, the full costing method and the full-variable costing method are preferred. Data that include only historical direct costs are, however, acceptable and should be useful.

H. Format for Consortia Program Evaluation

Program evaluations should be presented in clear formats. A format organization such as the following is recommended.

1. The name of the consortium

2. The title of the program being evaluated

3. The sponsoring and participating institutions, departments, and programs

4. Personnel by institution (administrators, faculty, staff)

5. Context

   a. Brief history and need

   b. Objectives as related to institutional and consortium goals

   c. Program description - operations, special provisions, timetable, enrollment, capacity, comparative statistical data, accreditation status, and other descriptive statements

6. Advantages and disadvantages for students, staff, institutions, and funding sources

7. Cost Data and Interpretation

8. Validation and reconciliation

9. Conclusions and recommendations

I. Recommended Steps for the Preparation of a Program Evaluation

A sequence of steps is recommended for the preparation of the evaluation. This sequence uses some of the accounting structure developed in NACUBO's "Fundamental Considerations for Determining Cost Information in Higher Education." (Ibid., Part 4:5).

Step One: List the Program Titles and Describe the Program

Step Two: Define the Purpose of the Project

Step Three: Determine for Whom the Report is Intended

A determination should be made of which persons or official bodies will approve the project, and the analysis should be designed for that audience. If, for example, the analysis is to be used by purchasing officers, a detailed report will be needed. If, however, the report is for the institutions' presidents, it probably should be a short summary report.

Step Four: Develop Criteria for Effectiveness

The purpose here is to obtain the commitment of the persons or official bodies responsible for approving the preparation of the cost analysis or evaluation, and those who will implement the project. Techniques for obtaining their commitment include brainstorming a new idea with them, and identifying and working closely with the persons who can sell the project to others and who can assist in developing cost data and reports. The cost analysis of consortium programs must be developed through a negotiation process, unlike institutional cost analysis where an officer determines the analytical sophistication desired and directs that it be achieved. In a consortium, this role belongs to a group of professionals who represent the different institutions, such as their librarians or purchasing officers. The professionals must determine the level of analytical sophistication desired; it is they who will evaluate the worth of the project and the validity of its cost information can be strengthened only by the decisions of the professionals. To achieve agreement in such groups often requires considerable negotiation over a long period of time.

It is recommended that the cost analysis or evaluation of a program include, or be supplemented by, statements that reflect the judgments of the concerned professionals about its value. Rigorously defined, such opinions would be obtained independently and through a complex series of interviews or questionnaires. For purposes of establishing the value of the consortium project or the validity of cost information, a modified use of this approach can be helpful. The statements may be obtained through the minutes of the meetings of the professionals, through individual letters written by them, or through a telephone poll. Whatever method is used, it is important that their recommendations be in writing.

Step Five: Define the Data to be Collected

This important step of the cost analysis is, like some other steps, usually negotiated. Until all institutions within a consortium have a common costing system, agreement on data definitions must be reached among those in the institutions responsible for the program's success. This step has two parts.

(a.) Establish criteria for success

Quantitative criteria for determining the success of programs must be determined by professionals within the institutions. Examples of such criteria are:

Joint purchasing - comparison of the cost of purchases

Cross-registration - average student credit hours of income

Computer sharing - comparison of the cost of one hour of computer time

Determining these criteria is at the heart of a cost-analysis for the consortium program. When the units and methods of measurement are agreed on, the collection and presentation of the data can proceed. Agreement is more difficult when some institutions prefer that their accounts determine the cost of a program by total costs, while others prefer average or unit cost. The literature search suggested that the variation among institutions in preferred method of measurement is not merely a common problem, it is universal.

No consortium program will obtain institutional cost data that do not require some modification to make the data compatible. This is the reason for small beginnings which, it is hoped, will provide incentive for the institutional professionals to develop comparable data. Fundamental criteria that can be used to determine the financial success or failure of a program are essential, and they must be negotiated by the professionals in the consortium program. If the criteria and data that these persons have produced are used, they will stand behind the criteria, the data, and the results of the evaluation.

(b.) Collect and display the data

Once the criteria for success have been determined, the next step is the negotiation of a common structure for the accounts in which the data will be collected. We recommend that data collection and display be according to the following rules:

- Data should be collected and displayed by each institution.

- Data should be collected and displayed either as a one-time occurrence, such as a single joint purchase, or by fiscal year.

- Data should be collected in negotiated accounts which, for the sake of validity, agree as closely as possible with the institutions' financial accounts. Unavoidable differences should be noted in the report.

- A commonly-used account format such as the following should be used:

  Compensation
    Salaries
    Wages
    Fringe Benefits

  Supplies and Services
    Consummable supplies and materials
    Communications

  Travel

  Non-Capital Equipment

  Other

Correct methodology is necessary but is not sufficient. Whether the cost analysis of a consortium's programs will meet the NACUBO costing standards will depend on whether or not the data made available by the consortium and its member institutions meet the NACUBO standards. It is hoped that more and more institutions of higher education will adopt the NACUBO costing standards and that the general level of cost analysis will rise in the future. As it does rise, the potential for excellence in the development of cost analysis for consortium programs should be more fully realized than it now is.

Step Six: Analysis of Data

Since the aim of the cost analysis is to demonstrate quantitatively the value of a cooperative program to the consortium's member institutions, its costs must be compared with its benefits. In their simplest form, the benefits may be classified into three groups; the concept of benefits is the distinguishing characteristic that determines how a program should be classified. A model has been developed for each group.

(a) Cost-saving model: Benefits in reduced operating costs

In this group are programs intended to yield cost-saving, that is, reduced operating costs, for the member institutions. The reductions in operating costs are demonstrated by a comparison of (a) the costs that would be incurred by the institutions if each of them conducted the program's functions independently of the other institutions (assumption: there is no consortium) with (b) the costs incurred by each of them under the cooperative arrangement within the consortium. The concepts and methods of calculation for this type of cost-saving are shown in the following model:

$$\begin{array}{llccccccccc}
(1) & & Ca & + & Cb & + & \ldots & + & Cx & = & TCi \\
(2) & \text{Less} & \underline{CCa} & + & \underline{CCb} & + & \ldots & + & \underline{CCx} & = & \underline{TCx} \\
 & & & & & & & & & & \\
(3) & & GSa & + & GSb & + & \ldots & + & CSx & = & GSi \\
(4) & \text{Less} & \underline{AEa} & + & \underline{AEb} & + & \ldots & + & \underline{AEx} & = & \underline{AEz} \\
 & & & & & & & & & & \\
(5) & & \underline{NSa} & + & \underline{NSb} & + & \ldots & + & NSx & = & NSi
\end{array}$$

The consortium has X colleges: College A (first column), College B (second column), and so forth.

Line (1) shows the costs of operating independently. There is no consortium; each college conducts the functions of the program for which the cost analysis is being prepared independently of the other colleges. The costs for College A are Ca; for College B, Cb; and so forth. TCi is the sum total of costs for these programs when the colleges operate the programs independently of one another.

Line (2) shows the costs incurred by each college on its own campus, by its own personnel, under the cooperative arrangement of the consortium. Excluded are payments to the consortium's central office for administration of the program, which are shown in line (4). CCa are the cooperative costs (costs of the consortium program) at College A (except its payments to the consortium's central administration), CCb are the costs to College B, and so forth. TCz are the total costs incurred by all of the colleges for the program (except their payments to the central administration).

Line (3) shows for each college the difference between the cost of operating the program's functions independently of the other colleges, and its cost of operating the consortium program. GSa is the gross saving for College A, that is, the difference between the costs of an independent operation and its costs for the consortium program. GSb is the gross saving for College B, and so forth. GSi is the gross saving for all colleges combined.

Line (4) shows the administrative expense of the program incurred by the central offices of the consortium. AEa is the portion of those expenses paid by College A, AEb is the portion paid by College B, and so forth. AEz are the total expenses of the central offices for the program (after separating out any expenses financed by gifts and grants awarded to the consortium).

Line (5) shows the net saving to each institution after all costs of the consortium program - those incurred by the institution (line 2 costs) and those incurred by the central consortium offices (line 4 expenses) - have been accounted for. NSa is the net saving to College A - or the benefits - attributable to the cooperative program. NSb is the net saving to College B, and so forth. NSi is the combined net saving enjoyed by all of the colleges.

(b) Revenue model: Benefits in increased revenues

In this group are cooperative programs that yield revenues over and above revenues that could be realized by the colleges if each of them conducted the program functions independently of the other colleges. The concepts and methods of calculating these types of benefits are shown in the following model:

$$\begin{array}{llccccccccccc}
(1) & & \text{CRa} & + & \text{CRb} & + & \dots & + & \text{CRx} & + & \text{CRco} & = & \text{CRz} \\
(2) & \text{Less} & \underline{\text{Ra}} & + & \underline{\text{Rb}} & + & \dots & + & \underline{\text{Rx}} & & \underline{\qquad} & = & \underline{\text{Ri}} \\
 & & & & & & & & & & & & \\
(3) & & \underline{\text{Ra}} & + & \underline{\text{Rb}} & + & \dots & + & \underline{\text{Rx}} & + & \underline{\text{CRco}} & = & \underline{\text{R(i+co)}} \\
 & & & & & & & & & & & & \\
(4) & & \text{CCa} & + & \text{CCb} & + & \dots & + & \text{CCx} & + & \text{AEco} & = & \text{CCz} \\
(5) & \text{Less} & \underline{\text{Ca}} & + & \underline{\text{Cb}} & + & \dots & + & \underline{\text{Cx}} & & \underline{\qquad} & = & \underline{\text{Ci}} \\
 & & & & & & & & & & & & \\
(6) & & \underline{\text{Ca}} & + & \underline{\text{Cb}} & + & \dots & + & \underline{\text{Cx}} & + & \underline{\text{AEco}} & = & \underline{\text{C(i+co)}} \\
(7) = & & & & & & & & & & \text{NRco} & & \\
\quad (3)-(6) & & \text{NRa} & + & \text{NRb} & + & \dots & + & \text{NRx} & + & \text{or} & + & \text{Ri} \\
 & & & & & & & & & & \text{NEco} & &
\end{array}$$

Line (1) shows the revenues realized by each college under the cooperative program, and the revenues realized by the central offices of the consortium (CRco). The sum of all of these, CRz, is the total revenues realized by the cooperative program.

Line (2) shows the revenues that would be realized by each college (for the functions with which the cost analysis is concerned) if there were no consortium program (assumption: there is no consortium), and the sum total of these amounts (Ri) for all of the colleges collectively.

Line (3) shows the increase in revenues realized by each college as a result of the consortium program, and the revenues realized by the central offices (CRco). The sum total of these additional amounts and the central offices' revenues is the collective increase in revenues that is attributable to the consortium program, shown as R(i+co).

Line (4) shows the costs incurred by each college in operating the cooperative program - the cooperative costs for College A (CCa), and so forth - and the administrative expenses for the program incurred by the central offices (AEco). The sum of these amounts gives the collective costs of the program (CCz).

Line (5) shows the costs that each college would incur if it operated the

the functions of the program (with which the cost analysis is concerned) independently of the other colleges (assumption: there is no consortium). The total cost for all of them operating independently of each other is shown by Ci.

Line (6) shows the difference between the costs of operating the cooperative programs and the costs of operating independently.

Line (7) shows the net revenues realized from the cooperative programs. It is the difference between line (3) and line (6), that is, the additional revenues realized by the cooperative program minus the additional costs incurred because of the cooperative program. It takes account of the possibility that the central offices may have a surplus in the program's revenues over its expenses (NRco), and the possibility that there may be a deficit in the program (NEco). The sum total of these amounts (Ri) is the additional revenues realized, over and above the costs of the program, as a result of the consortium program. It is a calculation of the net benefits realized by the colleges from their participation in the consortium program.

(c) Resource sharing model: Benefits in increased services through interinstitutional sharing of faculty, staff, programs, facilities and other resources

(Resource sharing with enlarged benefits for students and faculties is measured in numerous different ways. The concepts and methods of measurement are being developed by visiting teams in the CIL/Carnegie Project. When the team reports are complete, or nearly so, from the visits made through 1979, this section will be written.)

J. Summary

Prior to the beginning of the CIL/Carnegie Project, there was no methodology available to analyze the cost effectiveness of interinstititional cooperation. A careful review of the literature related to cost analysis in higher education uncovered little that was directly related to consortia.

Recognizing the need for a method of analysing cost effectiveness which would be useful to consortium directors, regardless of the structure or purpose of the consortium, this paper outlined alternative costing methods and suggested criteria for choosing a methodology to evaluate consortium cost effectiveness. Additionally, a common format for cooperative program evaluation reports was developed in conjunction with a recommended series of steps for preparing an evaluation.

The cost analysis concepts and procedural recommendations in this paper formed the basis for the evaluation process used throughout the CIL/Carnegie Project.